CELSIUS

CELSIUS Mobile A

English

FUJITSU COMPUTERS
SIEMENS

Are there ...

... any technical problems or other questions which you would like to be clarified?

Please contact:
- your sales partner
- your sales outlet

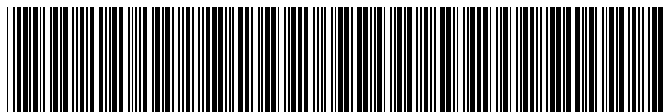Further information can be found in the "Safety" and "Warranty" manuals.

The latest information on our products, tips, updates, etc., can be found on the internet under: *http://www.fujitsu-siemens.com*

A26391-K113-Z120-1-7619

CELSIUS Mobile A

Operating manual

December 2002 edition

This manual was produced by
cognitas. Gesellschaft für Technik-Dokumentation mbH
www.cognitas.de

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Introduction

Your CELSIUS Mobile A is a versatile and ergonomic notebook. Innovative technology and ergonomic design make this notebook the ideal user-friendly and reliable travel companion.

To simplify the initial start-up of your notebook, one or two operating systems are preinstalled on the hard disk (dual-installation). If two operating systems are preinstalled, you can select which of the two operating systems you want to install during initial start-up.

The energy-saving processor and the configurable energy-saving functions allow you to make the most effective use of the battery capacity.

Your notebook has 128 -1024 Mbyte of main memory installed, depending on the upgrade level. Data is stored on a hard disk drive. Your notebook is also equipped with a 3 1/2-inch disk drive. Depending on the model, your notebook is delivered with a CD-RW drive, a DVD-ROM drive or a combo drive (CD-RW/DVD). A PC card slot (CardBus or PCMCIA) enables the device to operate two type II PC cards or one type III PC card. Depending on the variant, your notebook may be equipped with an internal mini-PCI board.

Your notebook has connectors for external devices such as an external monitor, a printer, and a mouse. The ECP capable parallel port is designed for fast bi-directional data transfer. You can connect peripheral devices such as a scanner, loudspeakers, gamepads, keyboard, or mouse via the two USB ports. In addition, your notebook is equipped with a TV-Out connector to connect to a television.

For mouse control, the notebook has a touchpad with touchpad buttons.

An audio controller, two built in loudspeakers and a built in microphone provide your notebook with an audio capability. You can thus incorporate voice, noise effects and music into your notebook environment. You can also connect an external microphone and an external loudspeaker.

The system settings of the notebook can be configured via the user-friendly *BIOS Setup* programme. Certain system settings (e.g. screen display, energy saving functions) can be modified via various key combinations while you are using the notebook.

Your notebook has a number of security features to ensure that no unauthorised persons can access your data. You can activate the fingerprint sensor for example. The security functions in the *BIOS Setup* also allow you to protect your data by means of passwords.

This operating manual tells you how to put your notebook into operation and how to operate it in daily use.

Additional information on your notebook is contained in the following documents:

- in the "Safety" manual
- in the "Ergonomics" manual
- in the "Getting Started" manual
- in the documentation of the operating system
- in the information files (e.g. *.TXT*, *.DOC*, *.WRI*, *.HLP, *.PDF*)

Notational conventions

The following symbols are used in this manual:

Indicates information which is important for your health or for preventing physical damage. Failure to follow the instructions may lead to loss of data, invalidate your warranty, destroy the notebook, or endanger your life.

i Indicates important information which is required to use the system properly.

► Text which follows this symbol describes activities that must be performed in the order shown.

This font indicates screen outputs.

This font indicates programme names, commands, or menu items.

"Quotation marks" indicate names of chapters, data carriers, and terms that are being emphasised.

Important notes

Here you will find essential safety information regarding your notebook. In addition, the manufacturer's notes contain helpful information about your notebook.

Safety

⚠ Pay attention to the information provided in the "Safety" manual and in the following security notes.

Observe the sections in the manual marked with the symbol on the left.

- During installation and before operating the device, please observe the instructions on environmental conditions in the "Technical data" chapter as well as the instructions in the "Preparing the notebook for use" chapter.

- When connecting and disconnecting cables, observe the relevant notes in this operating manual.

- When cleaning the device, please observe the relevant notes in the "Cleaning the notebook" paragraph.

- Only use batteries designed for this notebook.
  Do not store batteries for longer periods in the notebook.
  Take care not to drop the batteries or otherwise damage their casing (fire risk).
  If the rechargeable batteries are defective, they must not be used.
  Do not touch the contacts of the batteries.
  Never interconnect the positive and negative terminals of a battery.
  Used batteries must be disposed of in accordance with local regulations (special waste).

- Your notebook is equipped with numerous security functions that offer you a high level of security according to a multi-level concept. Detailed information can be found in "Security functions" chapter.

This notebook complies with the relevant safety regulations for data processing equipment. If you have questions as to whether you can set up the notebook in the intended environment, please contact your sales point or our hotline/help desk.

Notes on installing and removing boards and modules

⚠ Only qualified technicians should repair the device. Unauthorised opening or incorrect repair may greatly endanger the user (electric shock, fire risk).

Boards with electrostatic sensitive devices (ESD) are identifiable by the label shown.
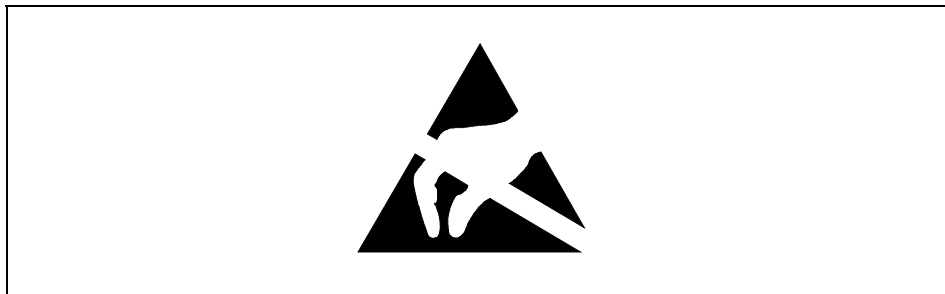
When you handle boards fitted with ESDs, you must, under all circumstances, observe the following points:

- You must statically discharge yourself before working with boards (e.g. by touching a grounded object).
- The equipment and tools you use must be free of static charges.
- Remove the power plug from the mains supply before inserting or removing boards containing ESDs.
- Always hold boards with ESDs by their edges.
- Never touch pins or conductors on boards fitted with ESDs.

Manufacturer's notes

Keep this operating manual together with your device. If you pass on the device to third parties, you should include this manual.

Copyright-protected technology

This product incorporates copyright protection technology that is protected by method claims of certain U. S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorised by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorised by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

Energy saving

If you will not be using your notebook, switch it off.

Make use of the device's energy saving functions (see "Working with the notebook"). The notebook uses less power when the power management features are enabled. You will then be able to work for longer before having to recharge the battery.

Energy saving under Windows

If a monitor with energy saving features is connected to your notebook, you can use the *Screen Saver* tab to activate the energy saving features of the monitor. Select the following item in the start menu: *Settings - Control Panel - Display - Display Properties - Screen Saver - Energy saving functions for the display*. You can set additional energy saving functions in the start menu by selecting the following item: *Settings - Control Panel - Energy - Extended*.

Energy Star

The notebook from Fujitsu Siemens Computers is designed to conserve electricity by dropping to less than 8 W when it goes into standby/suspend mode and to less than 3 W when it goes into OFF mode. With this level of power management, the notebook qualifies for the U.S. Environmental Protection Agency's (EPA) Energy Star Computers award.

The EPA estimates that computer equipment uses 5 % percent of all business electricity and that this is growing rapidly. If all desktop PCs and peripherals enter a low-power mode when not in use, the overall savings in electricity could amount to $ 2 milliard annually. These savings could also prevent the emission of 20 million tons of carbon dioxide into the atmosphere - the equivalent of 5 million automobiles.
As an Energy Star Partner, Fujitsu Siemens Computers GmbH has determined that this product meets the Energy Star guidelines for energy efficiency.

Disposal and recycling

This device has been manufactured to the highest possible degree from materials which can be recycled or disposed of in a manner that is not environmentally damaging. The device may be taken back after use to be recycled, provided that it is returned in a condition that is the result of normal use. Any components not reclaimed will be disposed of in an environmentally acceptable manner.

Do not throw lithium batteries into the household waste. They must be disposed of in accordance with local regulations concerning special waste.

If you have any questions on disposal, please contact your local office, our hotline/help desk, or:

Fujitsu Siemens Computers GmbH
Recyclingcenter
D-33106 Paderborn

Tel: +49 5251 81 80 10
Fax: +49 5251 81 80 15

CE marking

C E   The shipped version of this device complies with the requirements of the EEC directives 89/336/EEC "Electromagnetic compatibility" and 73/23/EEC "Low voltage directive".

GS symbol

In normal screen mode (dark characters against a light background) the LCD panel satisfies the ergonomic requirements for the GS symbol.

Battery storage

i   If you do not use the batteries for long periods, remove them from the notebook. Never store the batteries in the unit.

Store the battery in a fully charged state. The battery should be stored in a dry area at a temperature between 0°C and +30°C. The lower the temperature at which the batteries are stored, the lower is the rate of self-discharge.

If storing for a long period of time (longer than two months) batteries should be fully charged before storage.

To be able to use the optimum battery charging capacity, you should work in the battery mode until the battery is completely discharged, and then recharge the battery.

Transporting the notebook

Please observe the points listed below when transporting your notebook.

Before you travel

- Back up important files stored on your hard disk.
- If you are travelling abroad, ensure that the power adapter can be operated with the local mains voltage. If this is not the case, obtain the appropriate power adapter for your notebook. Do not use any other voltage converter!

  i   If you travel in another country, check whether the local power supply and the specifications of the power cable are compatible. If this is not the case, buy a power cable that matches the local conditions. Do not use a connection adapter for electrical devices to connect the notebook.

  If you use a modem, incompatibilities with the local telecommunications system may result.

- If you wish to use your notebook during a flight, first check with the flight attendants if it is permissible to do so.

Transporting the notebook

- Remove all data carriers (e.g. floppy disk, CD) from the drives.
- Switch the notebook off.
- Unplug the power adapter and all peripheral devices from the mains outlet.
- Disconnect the power adapter cable and the data cables of all peripheral devices.
- Close the LCD screen so that it locks into place.
- If the device needs to be shipped, use the original packaging or other suitable packaging to protect it from damage caused by mishandling.
- To protect against damaging jolts and bumps, use a notebook carrying case to transport your notebook.
  Fujitsu Siemens Computers offers a number of solutions for transporting your notebook. The current offering can be viewed on the Internet at *http://www.e-shop2.de*.
- Protect the notebook from severe shocks and extreme temperatures (e.g. direct sunlight in a car).

Cleaning the notebook

- ► Switch the notebook off.
- ► Pull the power plug of the network adapter out of the mains outlet.
- ► Remove the battery.
  How to remove the battery is described in the section "Inserting and removing the battery".

Do not clean any interior parts yourself; leave this job to a service technician.

Do not use any cleaning agents that contain abrasives or may corrode plastic. The use of improper cleaning agents can damage the markings on the keyboard and the notebook, the paintwork of the device or the device itself.

Ensure that no liquid enters the notebook.

Wipe the casing with a dry cloth.
If particularly dirty, use a cloth that has been moistened in mild domestic detergent and then carefully wrung out.

To clean the keyboard and the touchpad, you can use disinfectant wipes.

Wipe the LCD screen with a soft, moistened cloth.

Preparing the notebook for use

⚠ Please read the "Important notes" chapter.

Before you can work with your notebook, you need to charge the battery and install and configure the delivered software. The operating system and drivers required are preinstalled.

Upon delivery, the battery can be found in the battery compartment and is not charged. You need to charge the battery if you want to operate your notebook with a rechargeable battery.

If you use the notebook in a normal office situation, run it from the mains using the power adapter.

Unpacking and checking the delivery

► Unpack all the individual parts.

► Check the delivery for damage incurred during transportation.

ℹ Should you discover damages incurred during transportation, notify your local sales outlet immediately!

Do not discard the original packing material of the devices. Keep the original packing material in case you need to ship the equipment again.

Switching on the notebook for the first time

When you switch on your notebook for the first time, the supplied software is installed and configured. You should plan some time for this, as this process must not be interrupted.

⚠️ Do not place it on a soft surface (e.g., a carpet or soft furnishings). The space between the notebook's feet must be clear. Place the notebook on a flat, stable, nonslippery surface.

Do not place the power adapter on heat-sensitive material.

The Notebook and the power adapter should be at least 200 mm apart.

Keep other objects 100 mm away from the notebook and its power adapter to ensure adequate ventilation.

Never cover the fan intake or exhaust openings of the notebook or the power adapter.

The power cable supplied conforms to the requirements of the country in which you purchased your notebook. Make sure that the power cable is approved for use in the country in which you intend to use it.

The power adapter's AC cord should only be connected to a mains outlet if the notebook is already connected to the power adapter.

Do not expose the notebook to extreme environmental conditions. Protect it from dust, humidity and heat.

Upon delivery, the battery can be found in the battery compartment and is not charged.

► Place the notebook on a flat, stable, nonslippery surface.
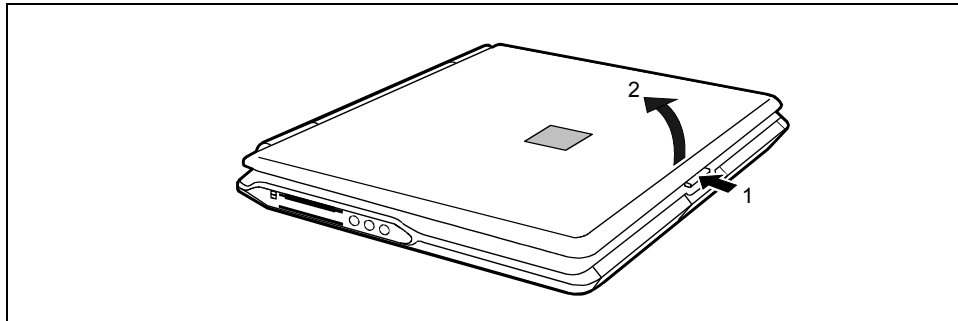
► Press the release button (1) and open the LED display panel (2).

Connecting the power adapter and switching on the notebook
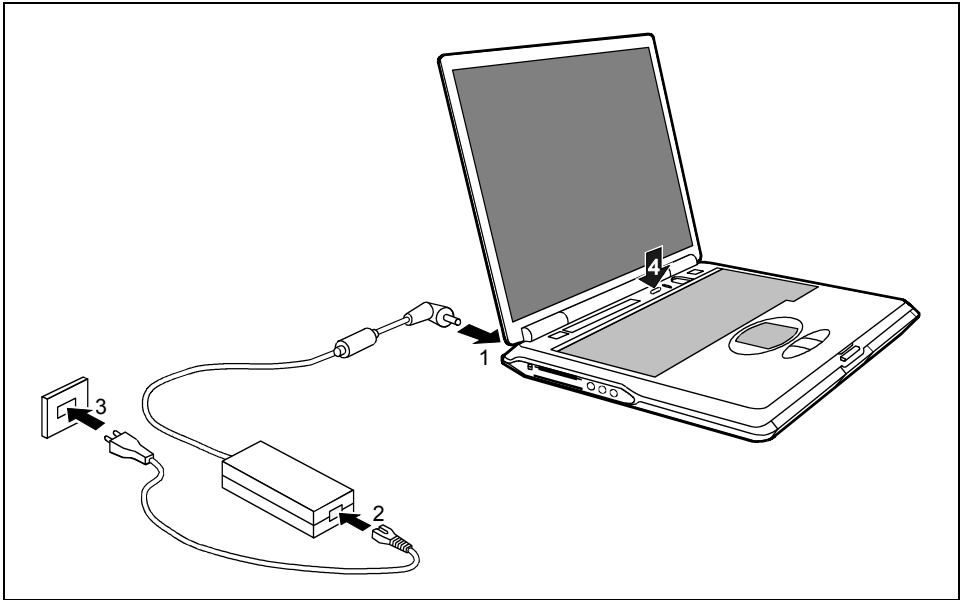
► Connect the power adapter cable to the DC jack (DC IN) of the notebook (1).

► Connect the power cable to the power adapter (2).

► Plug the power cable into the mains supply (3).

The power indicator ⎓ of the notebook lights up. The battery will charge.

► Press the Suspend/Resume button (4), and release it again.
The Suspend/Resume button functions like an ON/OFF switch.

The power-on indicator ① on the notebook lights up.

⚠ After switch-on a self-test (POST, Power On Self Test) is automatically carried out. Never switch the notebook off during the self-test.

First-time software installation

⚠ Leave the external power adapter connected to your notebook during the initial installation.

Once the installation has been started, the notebook must not be switched off!

During installation the notebook may only be rebooted when you are requested to do so!

► During installation, follow the instructions on screen.

Consult the operating system manual if there is anything unclear about the requested input data.

ⓘ You will find further information about the system, drivers, utilities, updates, manuals etc. on the "Drivers & Utilities" CD supplied.

Working with the notebook

This chapter describes the basics for operating your notebook.

Please see the "Connecting external devices" chapter for instructions on how to connect devices such as a mouse and a printer to the notebook.

Please take note of the information in the "Important notes" chapter.

Switching the notebook on
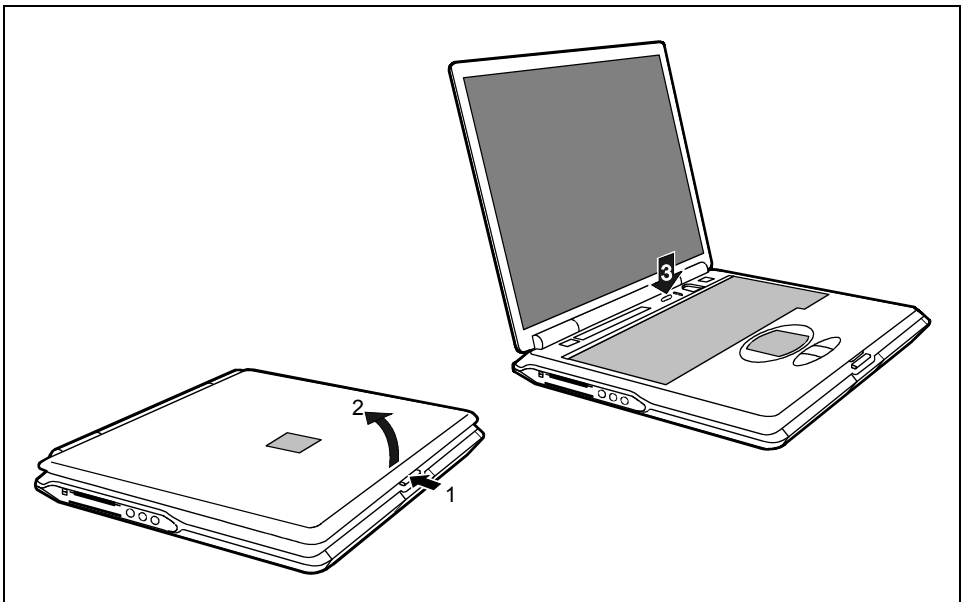
► Press the release button (1) and open the LED display panel (2).

► Press the Suspend/Resume button to switch on the notebook (3).

The power-on indicator ⏻ on the notebook lights up.

You can configure the Suspend/Resume button under *Start - Settings - Control Panel - Power Options - Power Options Properties*.

If you have assigned a password, you must enter this when requested to do so, in order to start the operating system password.

Switching the notebook off
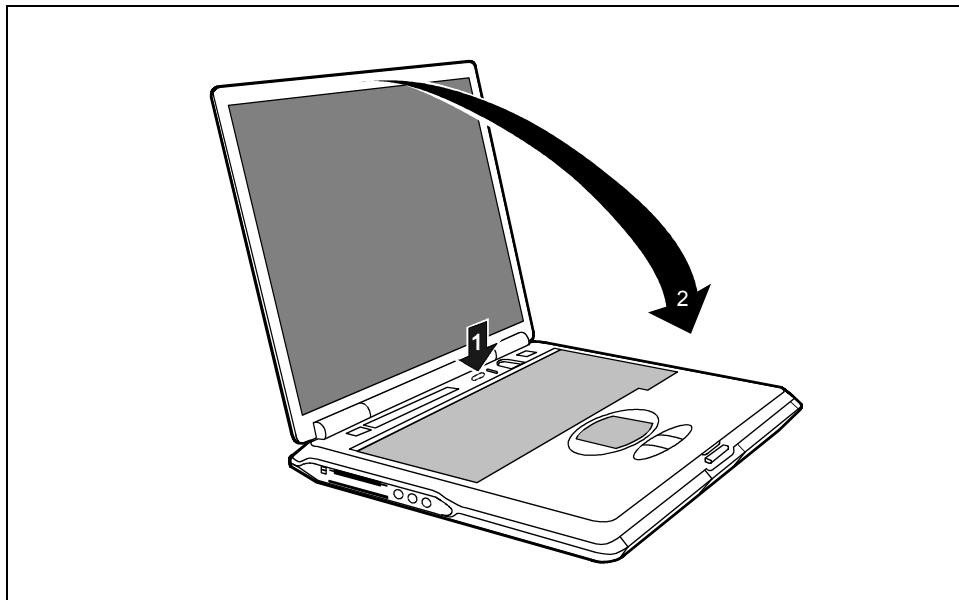
► Shut down the operating system properly.
   If the notebook does not switch off automatically, press the Suspend/Resume button for
   approx. four seconds (1) and release it again.

The notebook is switched off.

► Close the LCD screen of the notebook (2) so that it locks into place.

Switching off the notebook via the operating system

How you can switch off your notebook via the operating system is dependent on the settings of the
power-management feature. Additional information is contained in the section "Using the power-
management features" in this chapter.

i	Save all open files before switching the notebook into Standby mode to avoid data loss when the notebook remains switched off for a longer time.

Indicators

The following icons appear in the display field of your notebook:
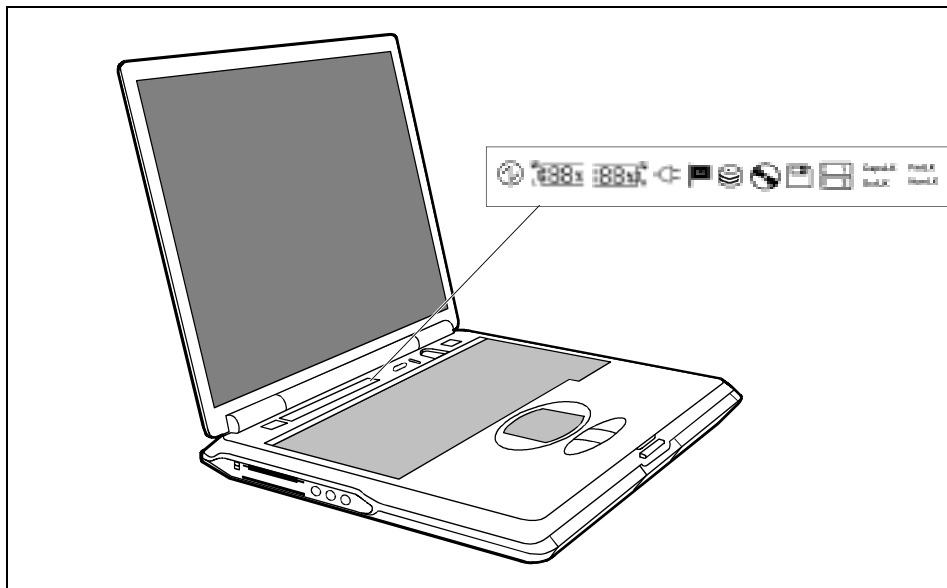
The meanings of the symbols are as follows:

Power-on indicator

- The indicator lights up: The notebook is on.

- The indicator flashes (1 second on / 1 second off):
  The notebook is in energy-saving mode.

- The indicator is dark:
  The notebook is switched off.

Battery indicator

The battery charge state is indicated in the status indicator panel.

Power indicator

The power adapter is supplying power to the notebook.

"Speed Step" indicator

The indicator shows the processor performance (see key combination Fn + F5). The complete symbol lights up, when the processor performs at its best.

Hard disk indicator

The indicator lights up when the hard disk drive is being accessed.

Optical drive indicator

The indicator is lit when the CD/DVD in the optical drive is being accessed.
You must not remove the CD/DVD from the drive when this indicator is lit.

LS240 drive indicator

The indicator lights up when a floppy disk in the LS240 drive is being accessed.
You must not remove the floppy disk from the floppy disk drive when this indicator is shown.

Indicator PC card 1 or 2

The indicator lights up when a PC card disk in slot 1 or 2 is being accessed.
You must not remove the PC card from the slot when this indicator is lit.

CapsLK   **CapsLK indicator (Caps Lock)**

The ⇧ key has been pressed. All the characters you type appear in uppercase. In the case of overlay keys, the character printed on the upper left of the key appears when that key is pressed.

ScrLK   **Scroll indicator (Scroll Lock)**

The $\boxed{\text{Scr}}$ key has been pressed. The effect this key has varies from programme to programme.

PadLK   **PadLK (Pad Lock) indicator**

The $\boxed{\text{Num LK}}$ key on the radio keyboard has been pressed. The numeric keypad on the radio keyboard is enabled.

NumLK   **NumLK indicator (Num Lock)**

The $\boxed{\text{Num LK}}$ key on the external keyboard has been pressed. The numeric keypad on the external keyboard is enabled.

Keyboard

i   The keyboard of your notebook is subject to continuous wear due to normal use. The keyboard markings are subjected to particularly high loads. The keyboard markings can wear off in the course of using the notebook.

The keyboard has been designed to provide all the functions of an enhanced keyboard. Some enhanced keyboard functions are mapped with key combinations.

The following description of keys refers to Windows. Additional functions supported by the keys are described in the relevant manuals supplied with your application programmes.

The figure below shows how to access the different characters on keys with overlaid functions. The example applies when the CapsLK indicator is not lit.
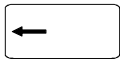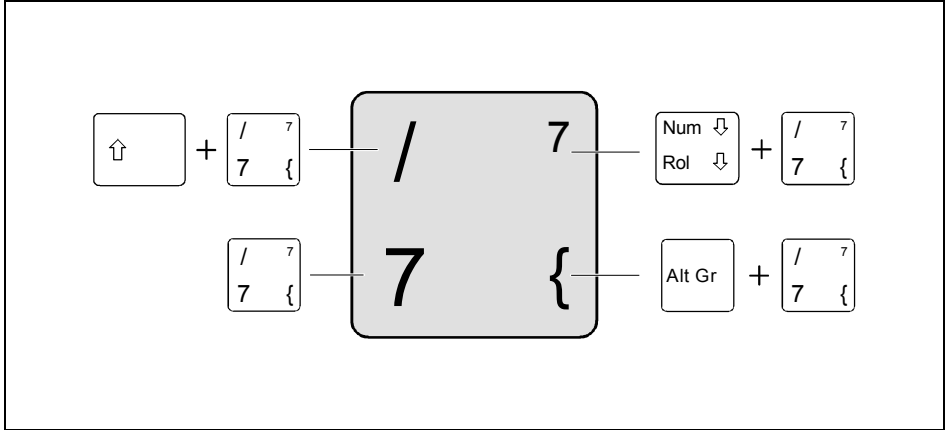
Backspace key
The Backspace key deletes the character to the left of the cursor.

Tab key
The Tab key moves the cursor to the next tab stop.
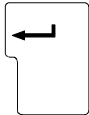
Enter key (return)
The enter key terminates a command line. The command you have entered is executed when you press this key.

Caps Lock key
The Caps Lock key activates uppercase mode (CapsLK indicator lit). The Caps Lock function causes all the characters you type to appear in uppercase. In the case of overlay keys, the character printed on the upper left of the key appears when that key is pressed.
To cancel the Caps Lock function, simply press the Caps Lock key again.

Shift key
The Shift key causes uppercase characters to appear. In the case of overlay keys, the character on the upper left of the keycap appears when that key is pressed.

Alt Gr key
The **Alt Gr** key allows one to type the characters printed on the lower right of the keycaps (e.g. { in the case of the **7** key on the German keyboard).

Fn key
The **Fn** key enables the special functions indicated on overlay keys (see "Key combinations").
If the external keyboard does not feature an **Fn** key, you can simultaneously press the **Ctrl** + **Alt Gr** keys or the **Ctrl** + **Alt** keys.
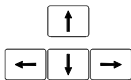
↑ ← ↓ →	**Cursor keys** The cursor keys move the cursor in the direction of the arrow, i.e. up, down, left, or right.
Break Pause	**Pause key** The **Pause** key temporarily suspends display output. Output will resume when you press any other key.
	Start key The Start key invokes the Windows Start menu.
	Menu key The Menu key invokes the menu for the marked item.

Numeric keypad

/ 7 {	(8 [	) 9]	= 0 }		7	8	9	x
U	I	O	P		4	5	6	-
1 J	K	L	Ö	2	1	2	3	+
M μ	; ,	: .	_ -		0		,	÷
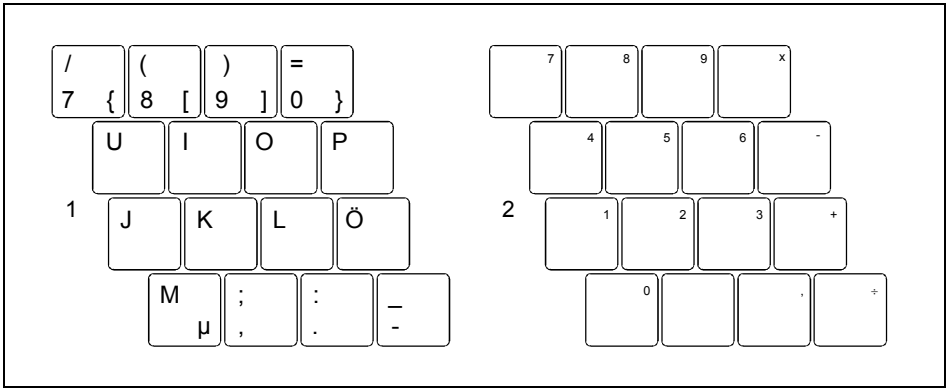
1 = Characters enabled when NumLK indicator is not lit (see "Indicators").
2 = Characters enabled when NumLK indicator is lit (see "Indicators").

If the numeric keypad is enabled (NumLK indicator is lit) and you hold down the **Fn** key, you can output the characters printed in blue on the bottom right of the keys.

Key combinations

The following description of key combinations refers to functions when using Microsoft Windows. Some of the following key combinations may not function in other operating systems and with some device drivers.

Other key combinations are described in the relevant manuals supplied with your application programmes.

Key combinations are performed as follows:

► Press and hold the first key in the combination.

► While holding the first key down, press the other key or keys in the combination.

i	If the external keyboard does not feature an **Fn** key, you can simultaneously press the **Ctrl** + **Alt Gr** keys or the **Ctrl** + **Alt** keys.
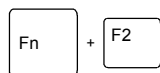
Fn	+ F2	**Undocking** This key combination prepares the workstation for undocking from the Port Replicator.
Fn	+ F3	**Enlarge MS-DOS screen** This key combination enlarges the screen in the MS-DOS mode to the full-screen mode or switches it back to the normal display mode.
Fn	+ F4	**Switch internal touchpad on/off** This key combination enables and disables the touchpad function. To do this, set the setting *Internal Pointing Device* to *Auto Disabled* in the *BIOS Setup* in the menu *Advanced - Keyboard/Mouse Features*.
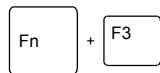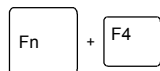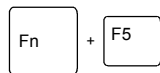
Fn	+ F5	**Switch Speed Step© mode on**
		This key combination switches between the possible Speed Step© modes:
		   – Maximum power
		   – Battery-optimised power (reduced process speed in battery mode)
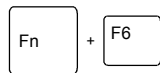
Fn	+ F6	**Switching the loudspeakers on/off** This key combination switches your device's integrated loudspeakers off and on.
Fn	+ F7	**Increasing the volume** This key combination raises the volume of the integrated loudspeakers.
Fn	+ F8	**Reducing the volume** This key combination reduces the volume of the integrated loudspeakers.
Fn	+ F10	**Switching between internal and external screen** If an external monitor is connected, the monitor on which the output is to be displayed can be selected with this key combination. You can opt to use: ● just the notebook's LCD screen ● just the external monitor ● both the LCD screen and the external monitor.
Fn	+ F11	**Increasing screen brightness** This key combination increases screen brightness.
Fn	+ F12	**Decreasing screen brightness** This key combination decreases screen brightness.
⇧	+ ⇤	**Backtab (Shift+Tab)** This key combination moves the cursor back to the previous tabular stop.
Ctrl + Alt + Del		**Carrying out a warm boot** This key combination triggers a reset and warm-boots the notebook. First hold down the **Ctrl** and **Alt** key, and then press the **Del** key. Under Windows 98, Windows 2000, Windows Me and Windows NT the Task Manager appears first. Then you must press all three keys again to re-boot.
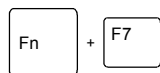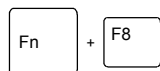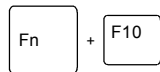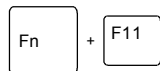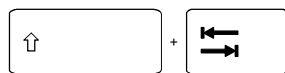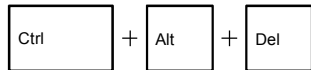
Touchpad and touchpad buttons

The touchpad enables you to move the mouse pointer on the screen. The two touchpad buttons allow the selection and execution of commands. They correspond to the buttons on a conventional mouse.
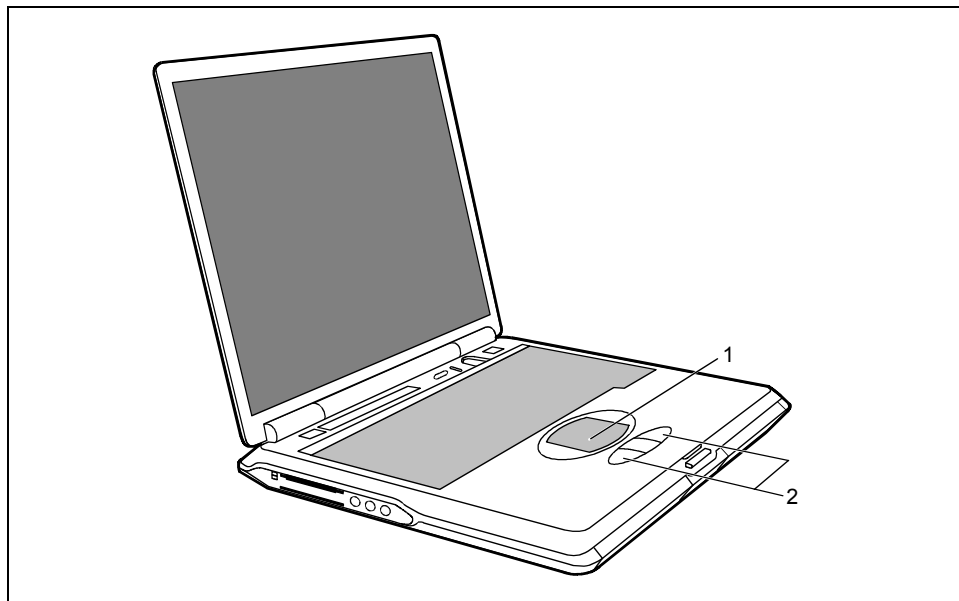
1 =   Touchpad   2 =   Touchpad buttons

Moving the pointer

►   Move your finger on the touchpad.

Selecting

►   Tap the touchpad once or press the left button once.

Executing a command

►   Tap the touchpad twice or press the left button twice.

Dragging an object

►   Move the pointer to the item you wish to select.

►   Select the desired object, and leave your finger on the touchpad.

►   Drag the object to the desired position.

►   Lift your finger from the touchpad.

Display settings

Setting the desktop area

You can change the screen resolution under *Start - Settings- Control Panel - Display - Settings* and then selecting from the *Resolution* field.

Adjusting the font size

Under *Start - Settings - Control Panel - Display - Settings* you can choose between a larger and a smaller font in the *Font size* field.

Adjusting the speed of the mouse pointer

You can change the speed of the mouse pointer under *Start - Settings - Control Panel - Mouse* and clicking on the *Motion* tab.

Setting the display brightness

You can adjust the brightness of your LCD screen with the keys [Fn] and [F12] or [Fn] and [F11]: With [Fn] and [F12], screen brightness will be reduced and with [Fn] and [F11] increased.

Synchronising the display on the LCD screen and an external monitor

Your notebook supports the simultaneous display on the LCD screen and an external monitor. If the picture does not appear correctly on the LCD monitor, press the key combination [Fn] + [F10] several times, or switch the external monitor off and then on again. This achieves good picture synchronisation.

Battery

The battery is one of the most important components of your notebook. When not plugged into a mains outlet, the notebook runs on its built-in battery. You can increase the life of the battery by caring for the battery properly. The average battery life is around 500 charge/discharge cycles. You can extend the battery life by taking advantage of the available energy saving functions.

Only use batteries released for your notebook.

Take care not to drop the batteries or otherwise damage their casing (fire risk).

If the rechargeable batteries are defective, they must not be used.

Do not touch the contacts of the batteries.

Never interconnect the positive and negative terminals of a battery.

Used batteries must be disposed of in accordance with local regulations (special waste).

Observe the information on battery storage in the "Important notes" chapter.

Performing the battery learning cycle

The battery contains electronics that continuously monitor the battery charging level and display the current charging level. To compensate for measuring errors in the electronics, and because the chemical properties of the battery change over time, the electronics must be recalibrated regularly. This calibration is carried out using a battery learning cycle. Using the battery learning cycle ensures that the maximum battery capacity can always be used. During the learning cycle a defined charging cycle is carried out.

i	The battery learning cycle lasts between four and six hours and must not be aborted. During this period you can not work with the notebook!
	After six months, at the latest, you should run a learning cycle with the battery again.

▶   Restart the notebook (switching ON/OFF or warm boot).

The following display briefly appears on the screen during start-up:

```
<ESC> Diagnostic screen    <F12> Boot Menu    <F2> BIOS Setup   <F6> Battery
learning
```

▶   Press function key ⏎F6⏎.

The learning cycle is started. When the learning cycle is ended, a corresponding message is displayed.

Charging the battery

The battery indicator displays the remaining battery charge (see the "Indicators" chapter). When you switch on the notebook, it takes a few seconds before the battery status is displayed.

You can charge the battery by connecting the notebook to the power adapter (see "Connecting the power adapter and switching on the notebook").

The battery can only be charged when the ambient temperature is between 5°C and max. 35°C.

With the notebook switched on or off, the battery will completely recharge in approximately three to four hours.

Work in the battery mode until an acoustic warning prompts you to recharge and the battery indicator begins to flash. The notebook battery should not be charged before this point.

If you do not connect the power adapter within five minutes of the signals described above, your notebook will automatically switch off.

Monitoring the battery charging level

The remaining battery charge is indicated by the battery symbol in the status indicator panel (see the "Indicators") chapter. When you switch on the notebook, it takes a few seconds before the battery status is displayed.

During mobile operation you can also use a "battery charge meter" for energy-saving monitoring under Windows.
A battery icon is shown in the taskbar. When you place the mouse pointer on the battery symbol, the system displays the battery status.
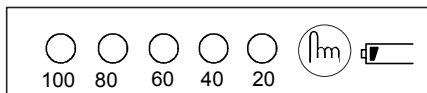
You can also see the battery's charging state on the battery itself.

There are five indicators next to the finger icon on the battery telling you what percentage of the battery is charged.

► Press the finger icon.

The corresponding indicator lights up.

i | If no power adapter is connected to the notebook , the keyboard battery will be charged by the notebook battery. Even if the notebook is switched off, the keyboard battery is charging and detracts energy from the notebook battery.

Inserting and removing the battery

⚠ | Only use batteries released for this notebook.

Never use force when inserting or removing a battery.

Make sure that no foreign objects enter the slots.

► Switch the notebook off.
► Place the notebook on a flat surface.
► Open the LCD display panel.

Removing the battery
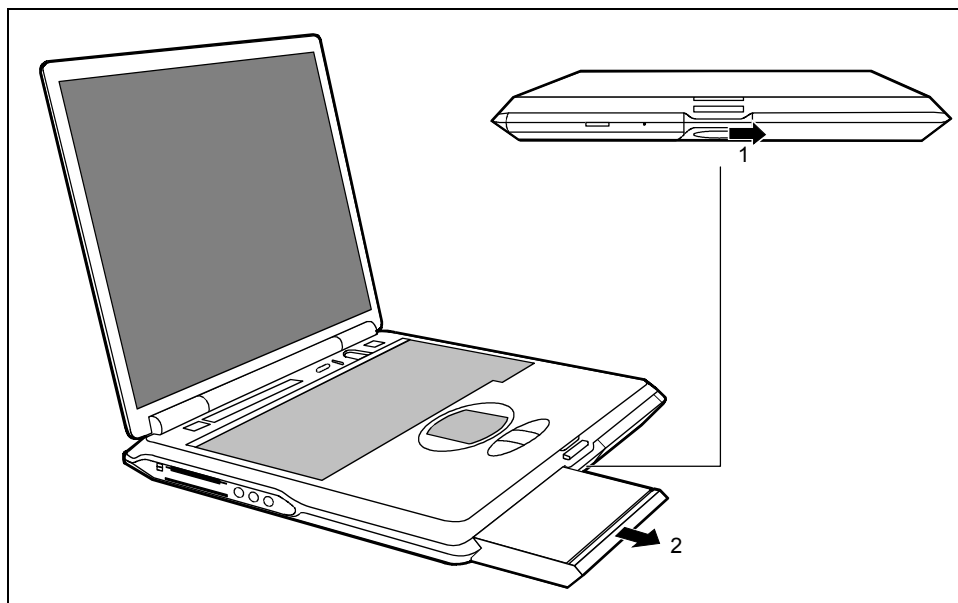
► Push the slide in the direction of the arrow (1) up to the stop and hold it in place.
► Pull the battery out of the casing in the direction of the arrow (2).

Installing the battery
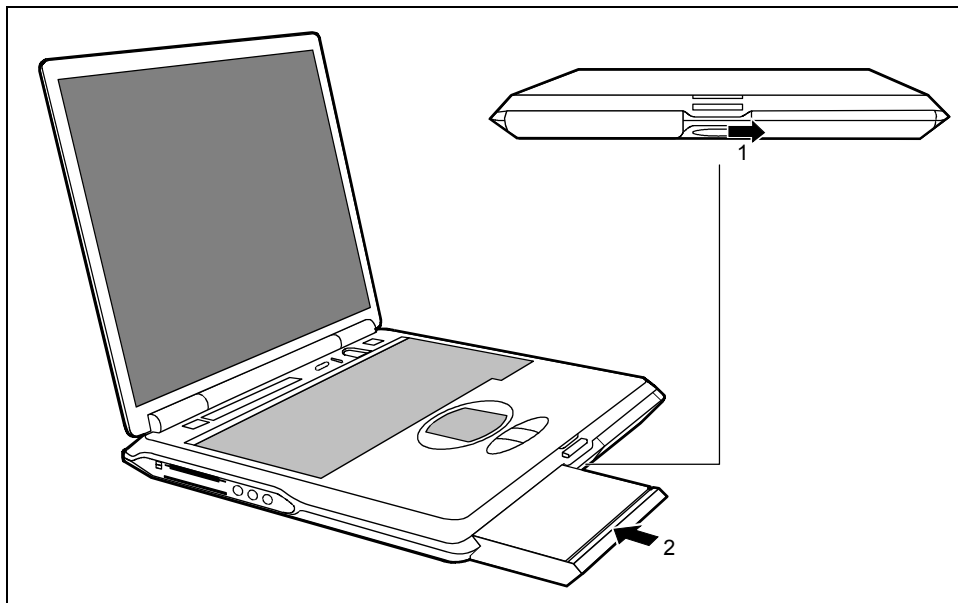
► Push the slide in the direction of the arrow (1) up to the stop and hold it in place.

► Position the battery at the edge of the casing (2) and then press it into the notebook.

Using the power-management features

The notebook uses less power when the power management features are enabled. You will then be able to work longer when using the battery before having to recharge it.

> **i**
> If you are connected to a network or use the integrated modem, PC LAN card, or PC modem card, we advise against enabling an energy saving mode. This could lead to an interruption of your network connection.
>
> When not using the notebook for long periods of time, first end the energy saving mode, then switch off the notebook. Never switch the notebook off with the Suspend/Resume button while the notebook is in one of the energy-saving modes.
>
> If your notebook is in an energy-saving mode:
>
> - Do not connect any external devices.
> - Do not disconnect any external devices.
> - Do not attempt to switch the notebook on if the built-in battery is flat.
> - Do not change or remove the floppy disk, if inserted.
> - Do not add or remove RAM.
> - Do not add or remove a PC card.
> - Do not replace or remove the battery.

Energy-saving modes of notebook

You can set two energy-saving modes with your notebook.

In the Suspend mode (*Suspend to DRAM/Standby*) all current data (active programmes, files) are buffered in the main memory, and in the Save-to-Disk mode (*Save to Disk/HibernateMode*) all current data are saved on the hard disk. Then the notebook is switched off. After the notebook is switched on, you can continue working from the point where you finished.

Operating systems with ACPI
(Windows 98, Windows Me and Windows 2000)

> **i**
> For operating systems with ACPI you can set the energy-saving functions under *Settings - Control Panel - Power Management* (e.g. *Standby, Hibernate mode* and *LCD off*).
>
> You can configure the Suspend/Resume button and the lid switch in the *Settings* tab under *Settings – Control Panel – Power Management*.
>
> Settings for energy-saving functions in the *BIOS Setup* are not taken into account by operating systems with ACPI.

Changing settings

► Double-click on the *My Computer* symbol.

► Double-click on the *Control Panel* symbol.

► Double-click on the *Power management* symbol in the control panel window.

The *Properties* dialogue field appears.

► Adjust the setting to your needs.

► Click on *OK* to save the settings.

| **i** | With Windows 2000 and Windows Me the default setting for *Hibernate mode* is *Disabled*. |

Additional information on this service programme is contained in the help function of Windows 98 and Windows 2000.

Operating systems with APM (Windows NT with APM extensions)

| **i** | For operating systems with APM (Advanced Power Management) you can set the energy-saving functions in the *BIOS Setup* (e.g. *Suspend to RAM*, *Save to Disk*, *LCD off* etc.). |

Setting energy-saving modes

► Call the *BIOS Setup*.

► Set which energy-saving mode you want to use in the *Power* menu.

► Set the *Auto Suspend Timeout* parameter in the *Power* menu to a time period after which the notebook is to be switched into the energy-saving mode.

Suspend to DRAM

In this mode the current data in the main memory (DRAM) is stored. The data is stored for as long as the notebook is supplied with energy. If the battery is full, the data is stored for a matter of days. Without a battery and without a power supply the current data is lost.

Save to Disk

So that the current data can be saved, sufficient memory must be available on the hard disk. If the operating system Windows NT or OS/2 Warp is used, a Save-to-Disk partition must be created on the hard disk (see manual for respective operating system).

Additional power-management features

Closed cover switch

When you close the LCD display panel, the notebook switches into Standby mode. Opening the LCD display panel ends Standby mode.

► Set the value *On* in the *BIOS Setup* in the *Power - Advanced Features* menu for the *Lid Closure Suspend* parameter if your notebook is to go into the energy-saving mode when the lid is folded down.

► If the energy-saving mode is to be ended again by folding up the LCD screen, then also set the *LidOpen Resume* parameter to *On*.

Power Button

You can configure the Suspend/Resume button.

If you want to use the Suspend/Resume button as an ON/OFF switch, set the *Power Button* parameter to *Power Off* in the *Power - Advanced Features* menu in the *BIOS Setup*.

Standby timeout

With this mode the LCD screen and internal components automatically switch off after a defined period of time. Any activity automatically returns the notebook to normal operation.

Hard Disk timeout

With this mode the motor of the hard disk drive is switched off as soon as no activity with the keyboard or the pointing device, or any other input or output activity takes place for a time period defined in the *BIOS Setup*.

This parameter is set in the *Power* menu in the *BIOS Setup*. When the hard disk is accessed, the motor of the hard disk drive is automatically switched on again.

Hard disk

The hard disk is the most important storage medium of your notebook. You can work considerably faster and more efficiently if you copy applications and files from floppy disks or CDs to your hard disk.

When the hard disk is accessed, the hard disk indicator lights up.

Inserting and removing modules

Modules can be optical drives, additional hard disk or floppy disk drives or batteries.

Only use modules released for this notebook.

Do not use force when installing or removing a module.

Make sure that no foreign objects enter the slots.

► Switch the notebook off.

► Place the notebook on a flat surface.

► Open the LCD display panel.

Removing modules
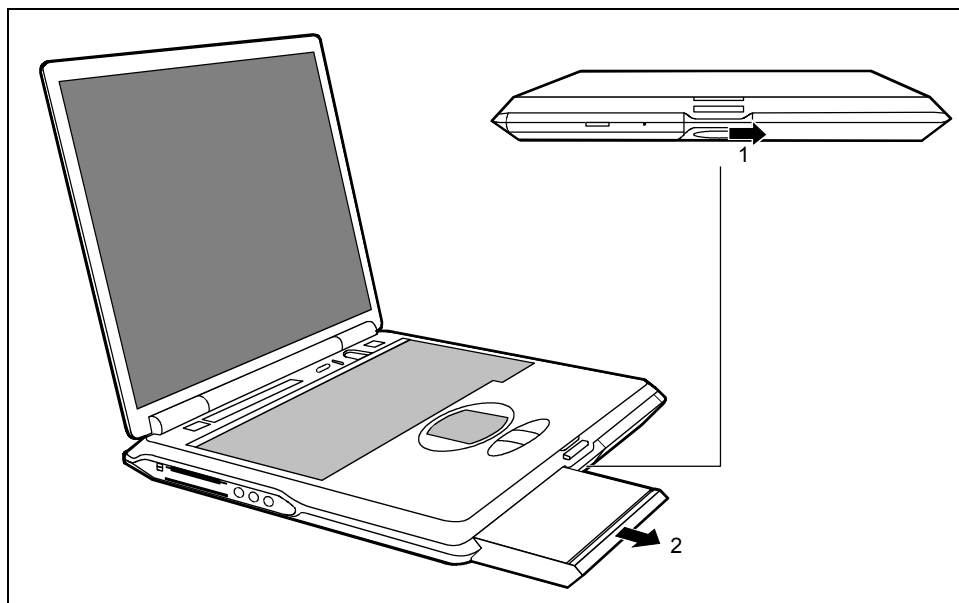
► Push the slide in the direction of the arrow (1) up to the stop and hold it in place.

> **i** To remove the left-hand module, push the slide to the right. To remove the right-hand module, push the slide to the left.

► Remove the module the direction of the arrow (2).

Installing modules
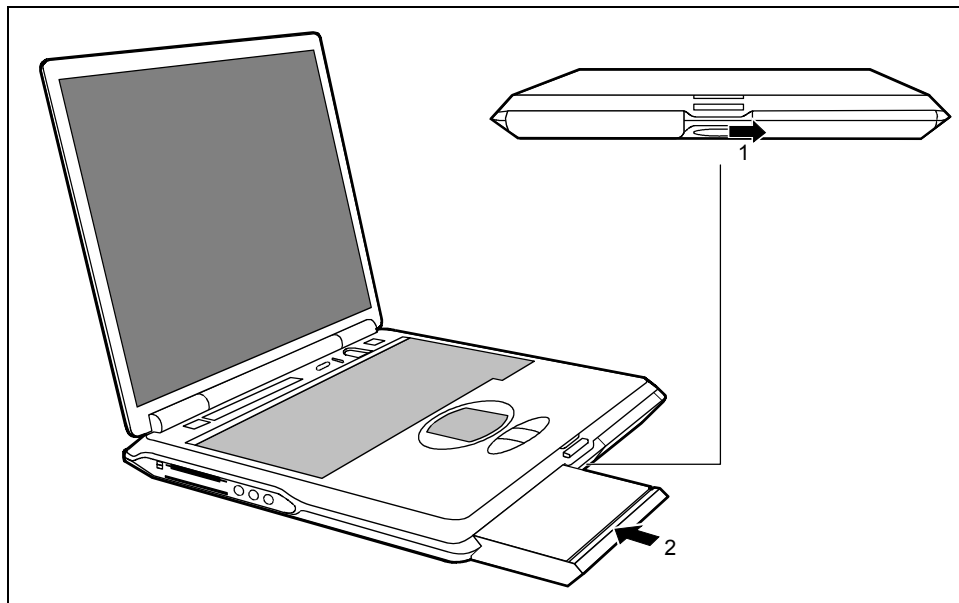
► Push the slide in the direction of the arrow (1) up to the stop and hold it in place.

| i | To install the left-hand module, push the slide to the right. To install the right-hand module, push the slide to the left. |

► Position the module at the edge of the casing (2) and then press it into the notebook.
► Release the slide (2).

Optical drives

Depending on the model, your notebook is equipped with a CR-ROM drive, a CD-RW drive, a DVD-ROM drive or a combo drive (CD-RW/DVD).

⚠️ This device contains a light-emitting diode, classified according to IEC 825-1:1993: LASER CLASS 1, and must not be opened.

Avoid touching the surface of a CD/DVD. Handle CDs/DVDs only by their edges!

Always store CDs/DVDs in their cases. Thus you avoid dust contamination, scratches, bending or other damage.

Protect your CDs/DVDs from dust, mechanical vibration and direct sunlight!

Avoid storing a CD/DVD in areas subject to high temperatures or humidity.

You may use both 8-cm and 12-cm CDs/DVDs in the optical drive.

When using CDs/DVDs of poor quality vibrations and reading errors may occur.

Optical drive indicator

The indicator ⊘ flashes when a CD/DVD is inserted. The indicator goes out when the drive is ready-to-operate. The indicator lights up when the drive is accessed.

i If the indicator does not go out after the CD/DVD is inserted, and continues to flash, the CD/DVD is probably damaged or dirty.

Inserting or removing a CD/DVD

The notebook must be switched on.

► Push the insert/eject button.

The drive tray will open.

► Pull the drive tray completely out.

► Place the CD/DVD in the drive tray with the label facing upwards.

or

► Take out an inserted CD/DVD.

► Push in the drive tray until you feel it lock into place.

Manual removal (emergency removal)

In the event of a power failure or damage to the drive it may be necessary to manually remove the CD/DVD.

► Switch the notebook off.

► Push a pen or a piece of wire (such as a paper clip) into the opening for manual ejection.

The drive tray is unlocked. You can now pull the drive tray out of the drive.

i	Please see the drive documentation for the location of the opening for manual removal.

LS240 floppy disk drive

⚠	Never clean the floppy disk drive with cleaning disks. Any attempt would destroy the read/write head in the disk drive within 20 seconds.
	Make sure that no floppy disk is inserted in the floppy disk drive during transport. Otherwise the eject button may break off and the floppy disk drive will be damaged.

Working with floppy disks

i	Follow the instructions supplied by the vendor of the floppy disks.
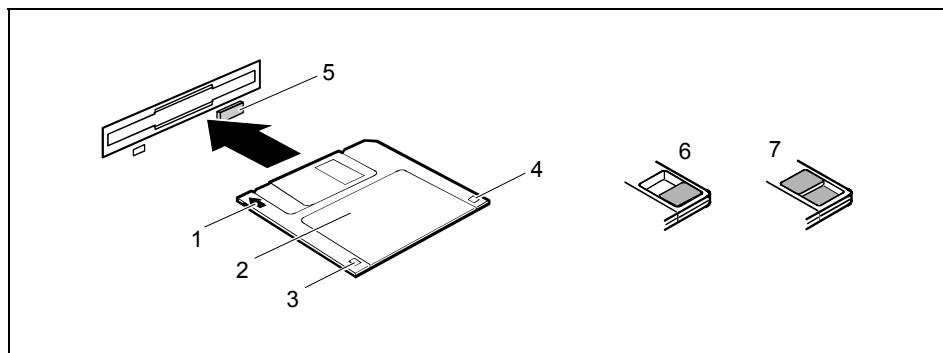
1 = Insertion direction
2 = Label area
3 = Write protection tab for a 1.44 Mbyte floppy disk
4 = Identification of a 1.44 MB floppy disk or write protect switch on a 120 MB floppy disk
5 = Eject button for inserted floppy disks
6 = Disk is write-protected
7 = Disk is not write-protected

To insert a diskette:

► Push the floppy disk into the drive in the insertion direction (1) until it engages. The label should be facing upward.

To remove a diskette:

► Push the eject button (5).

Protect the floppy disk against being overwritten or erased

► Slide the write-protect slider into position (6). The hole is now visible.

Deactivate write protection

► Slide the write-protect slider into position (7). The hole is now covered.

56k-Modem

Depending on the device version, a modem may already be installed in your notebook. The 56k modem supports all data communication applications, such as:

● Modem operation: High-speed downloads at up to 56,000 bit/s (V.90). Downward-compatible to V.34 modems.

● Fax mode: Transmitting and receiving at up to 14,400 bit/s

● Simple country adaptation with programme

The modem complies with the EU Directive 91/263/EEC (Telecommunications terminal equipment directive) and has been checked in agreement with the guideline TBR-21.

The modem can be operated in the following countries:

Multifrequency (MFC) dialling
Belgium, Denmark, Germany, Finland, France, Greece, Great Britain, Holland, Ireland, Iceland, Italy, Luxembourg, Norway, Austria, Portugal, Sweden, Switzerland and Spain.

Pulse dialling:
Belgium, France, Holland and Italy.

Also in: Poland, Slovenia, South Africa and Hungary.

Connecting notebook modem to telephone connection
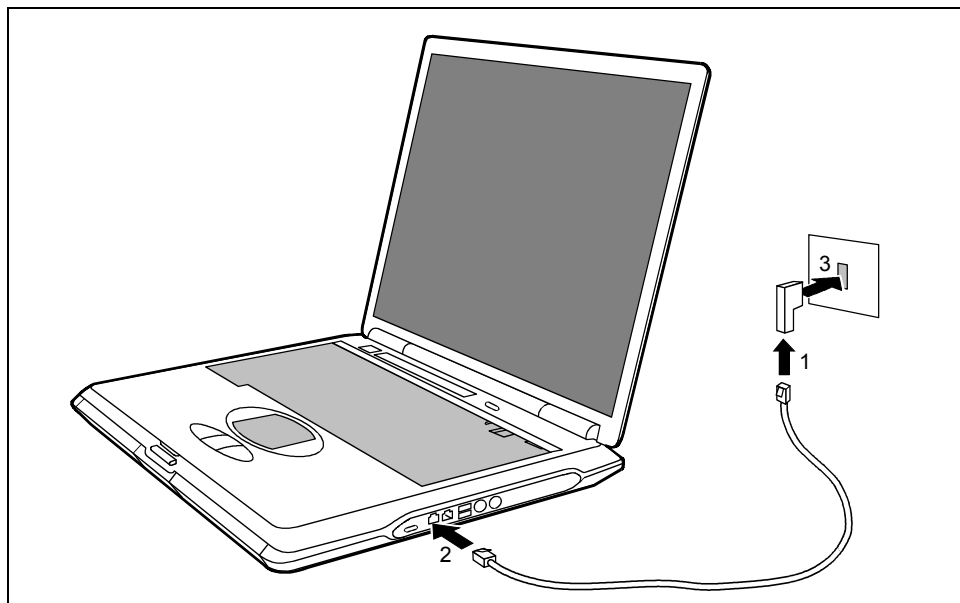
► Connect the modem cable supplied to the country-specific telephone adapter (1).

► Connect the modem cable to the modem port of the notebook (2).

► Connect the modem cable to your telephone wall socket (3).

i	If you attach your modem on a TAE-N-connector the phone respectively data cable is busy. The cable cannot be used for other communication devices at the same time. Pull the modem plug out of the TAE-N-power socket after the data transfer, because also with connected cable no other communication devices can be used.

Connecting IEEE1394 (FireWire)

Peripheral devices such as digital audio/video devices or other high-speed devices can be connected via IEEE1394 (FireWire). Your notebook can be equipped with an IEEE1394 (FireWire) connection, which operates at 400 Mbit per second, as an option.

► Connect the peripheral device to the IEEE1394 (FireWire) connection on the left-hand side of your notebook.

PC cards

Two PC card slots enable the device to operate two type II PC cards or one type III PC card (CardBus or PCMCIA).

⚠ Consult the documentation supplied by the PC card's manufacturer and follow the instructions provided.

Never use force when inserting or removing a PC card.

Make sure that foreign objects do not fall into the PC card slot.

Installing a PC card
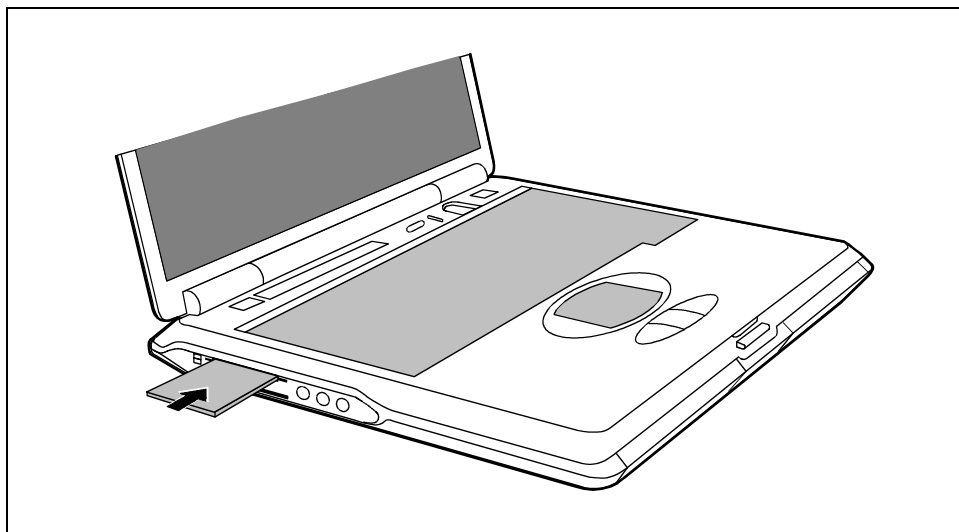
► Insert the PC card, contacts first, into the lower slot guide. The labelled side of the PC card should be facing upward.

► Gently push the PC card into the slot until you feel it click into place.

ℹ Consult the documentation supplied with the PC card for information on how to install the necessary device drivers.

For further information refer to the information files (e.g. *.TXT*, *.DOC*, *.WRI* or *.HLP*) provided on the PC card driver diskette or the information in the operating system manual.

You can push the PC card slot eject buttons into the notebook casing. Press the eject buttons until they snap in.

Removing a PC card
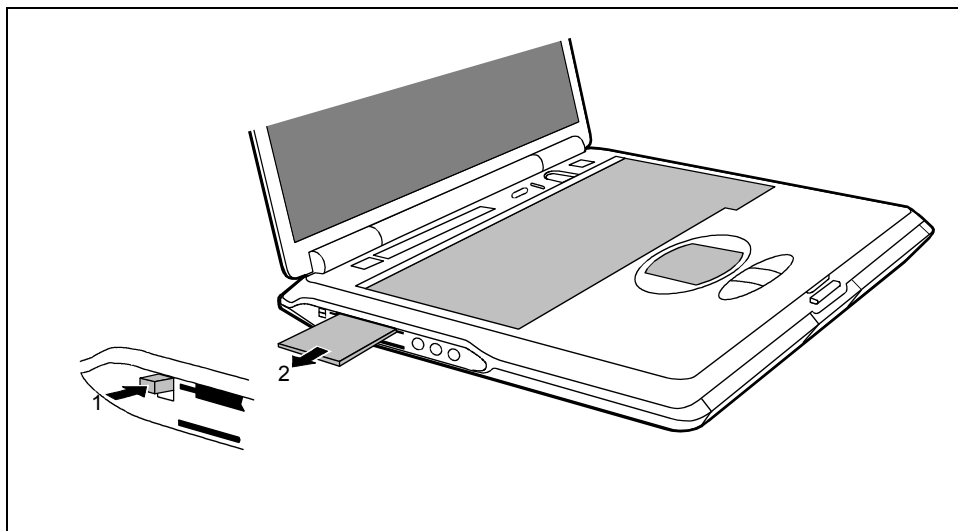
► Press the eject button (1). The PC card will project further out of the notebook's case. If the eject buttons are pushed in flush with the notebook casing, they must first be snapped out. Press the eject buttons until they snap out.

► Slide the PC card out of the notebook (2).

Microphone and loudspeakers
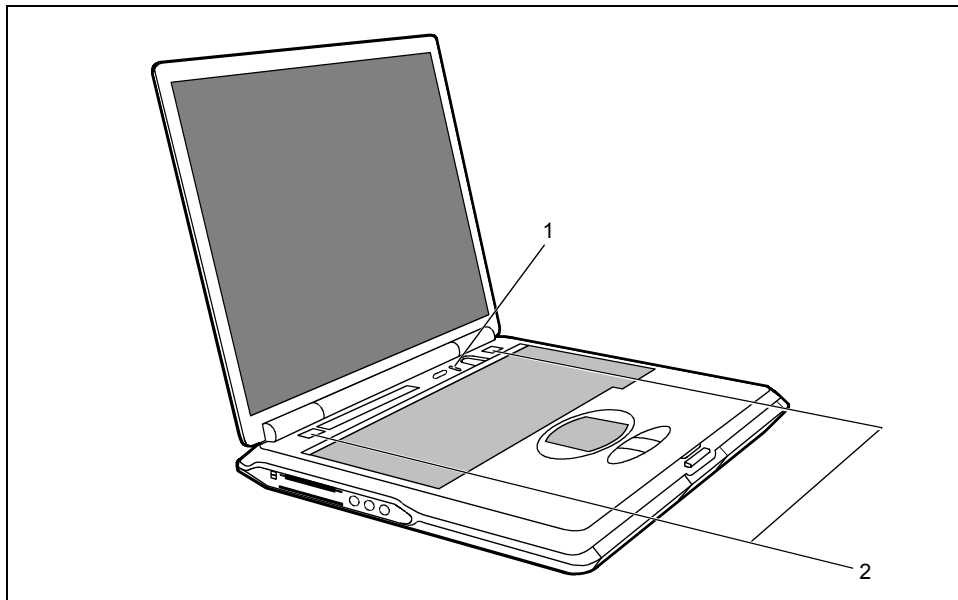
1 = built-in microphone   2 = built-in loudspeakers

Your notebook contains a built-in microphone (1) and two loudspeakers (2).

If you attach an external microphone, the built-in microphone is disabled. The internal loudspeakers switch off when you attach headphones or external loudspeakers to the audio jack.

Security functions

Your notebook enables you to protect your system and personal data in a number of ways against unauthorised access. By combining these options, you can achieve maximum protection for your system.

In this chapter you will learn which security functions your notebook is equipped with, which advantages these functions offer you and how to configure and use them.

![warning] Passwords must be assigned for some security functions. Please be sure to note these passwords, as otherwise you will no longer be able to access your system.

We recommend that you make a note of the passwords and keep them in a safe place.

If you lose both the user and the supervisor passwords, you must contact our help desk. The telephone numbers are contained in the "Help Desk" supplement. The loss of passwords is not a warranty case and is therefore subject to charge.

Overview of all security functions

The following sections contain a brief description of the security functions that are provided with your notebook as standard equipment.

Kensington Lock

With the Kensington MicroSaver, a sturdy steel cable, you can protect your notebook from theft. For this reason your notebook is equipped with a device for the Kensington MicroSaver. The Kensington MicroSaver is available as an accessory.

Password protection

You can protect you personal data from unauthorised access with various passwords. By combining these different options, you can achieve maximum protection for your system.

Password protection for the BIOS setup

With the Supervisor password you prevent unauthorised opening of the *BIOS Setup*, and with it access to important system settings. In the *BIOS Setup* you can also activate protection for the operating system and your hard disk.

Password protection for the operating system

With corresponding settings in the *BIOS Setup* you can block starting of the operating system. Only those who know the supervisor or user password can access the system.

Password protection for your hard disk

By activating the hard disk protection in the *BIOS Setup* you prevent unauthorised access to the hard disk drive. The hard disk password is checked internally during each system start-up and ensures that the hard disk can only be used in conjunction with the related device.

SmartCard reader

Your notebook also allows operation of a SmartCard via the SmartCard slot. The SmartCard can be used as a particularly secure alternative or as an addition to password protection. SmartCards are just as useful for digital signatures or for encrypting e-mails.

You can also read out other cards with your SmartCard reader (e.g. cell phone cards, health insurance cards, bank cards). For this purpose you also require the software matched to the respective card.

Fingerprint sensor

Your notebook is equipped with a fingerprint sensor. You can use the fingerprint sensor as an alternative to the BIOS password as system protection. By the way you can use the fingerprint-sensor under any operating system.

Brief overview of the security functions

Security function	Type of protection	Preparation
Kensington Lock	Mechanical	Mount and lock Kensington MicroSaver (accessory)
BIOS password protection	Password protection for *BIOS Setup*, operating system and hard disk with Supervisor and User password. The passwords consist of a maximum of eight alphanumeric characters.	Specify at least one Supervisor password in the *BIOS Setup* and activate the password protection for the operating system and hard disk as desired.
SmartCard	Protection of the operating system with PIN and SmartCard on which a "Public Key" or a password is stored.	Obtain SmartCard (accessory), install appropriate software, e.g. *Smarty* (accessory). Specify a password when using the *Smarty* software.
Fingerprint sensor	Protection of operating system by registered fingerprint.	Activate fingerprint reader in *BIOS Setup* and register fingerprint.

Using Kensington Lock
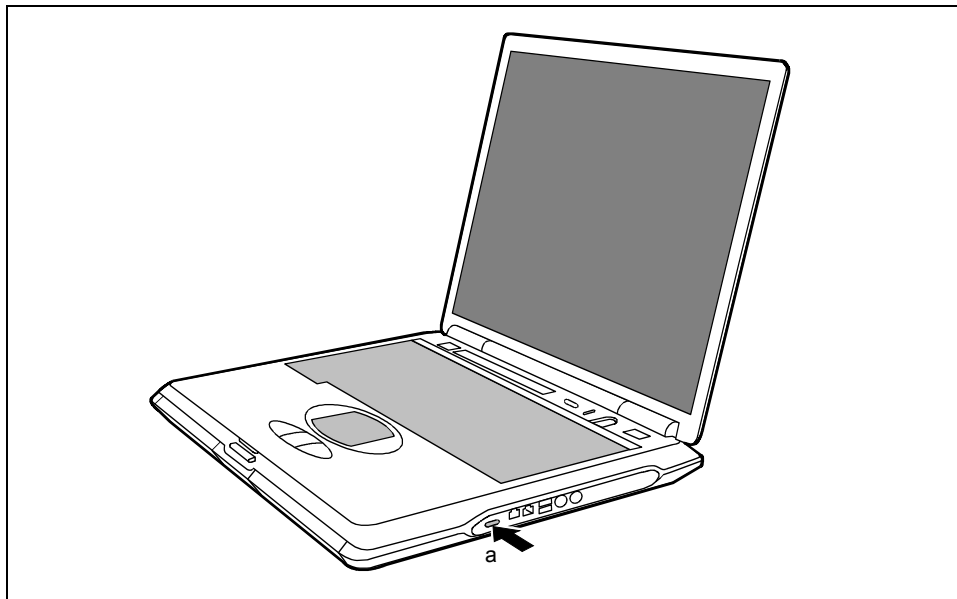
► Fit the Kensington MicroSaver on the device (a) on your notebook.

Configuring password protection in BIOS Setup

i Passwords can be up to eight characters long. You can use all alphanumeric characters and need not distinguish between uppercase and lowercase characters.

⚠ Before you exploit the various options of the password protection for your data security in the *BIOS Setup*, please note the following points:

Please keep in mind your passwords in any case, as you will not be able to access your BIOS setup and/or your system any longer, if you forget both the user password and the supervisor password. Deletion of passwords at the factory is not a warranty case and is therefore subject to charge.

Please care for a regular data backup on external data carriers!

Protecting BIOS Setup (supervisor and user password)

We recommend that you print out the following instructions, as these cannot be displayed while setting the password.

You prevent unauthorised opening of the *BIOS Setup* with both the supervisor and the user password. With the supervisor password you have access to all functions of the *BIOS Setup*, and with the user password only to part of the functions. You can only set a user password if a supervisor password has already been assigned.

Set the supervisor and user password

► Call *BIOS Setup* and select the *Security* menu. Please refer to section "Settings in BIOS Setup" for a description of operating the *BIOS Setup*.

| **i** | You always move within the *BIOS Setup* with the cursor keys. |

► Mark the *Set Supervisor Password* field and press the Enter key.

With *Enter new Password*: you are then requested to enter a password.

► Enter the password and press the Enter key.

With *Re-Enter new Password* you are asked to confirm the password.

► Enter the password again and press the Enter key.

With *Notice: Changes have been saved* you receive a confirmation that the new password has been saved.

► To assign the user password, mark the field *Set User Password* and proceed exactly as when configuring the supervisor password.

If you do not want to make any other settings, you can exit *BIOS Setup*.

► Select the *Exit Saving Changes* option in the *Exit* menu.

The notebook is rebooted and the new password is effective. If you now want to open the *BIOS Setup*, you must first enter your supervisor or user password. Please note that you only have access to a few BIOS settings with the user password.

Change supervisor or user password

► When changing the password, proceed exactly as for password assignment.

You can only change the supervisor password when you have logged into the *BIOS Setup* with the supervisor password.

Cancelling password

To cancel a password (without setting a new password) run the following steps:

► Call *BIOS Setup* and select the *Security* menu.

► Mark the *Set User Password* or *Set Supervisor Password* field and press the Enter key.

With *Enter new Password* you will then be asked to enter a password.

► Press the Enter key twice.

► Select the *Exit Saving Changes* option in the *Exit* menu.

The notebook is rebooted and the password is cancelled.

With the supervisor password you simultaneously deactivate the user password.

Password protection of operating system

i | With the supervisor password or the user password, which you have assigned in the *BIOS Setup* (see the "Entering supervisor and user password" section), you can also block booting of the operating system.

Activating system protection

► Call *BIOS Setup* and select the *Security* menu.

► If you have not assigned BIOS passwords yet, you now specify the supervisor, and the user password if desired (see "Entering supervisor and user password" chapter).

► Mark the *Password on Boot* field and press the Enter key.

► Select the *Every Boot* entry and press the Enter key.

If you do not want to make any other settings, you can exit *BIOS Setup*.

► Select the *Exit Saving Changes* option in the *Exit* menu.

The notebook reboots and you are asked to enter your password (the supervisor or user password).

Deactivating system protection

► Call *BIOS Setup* and select the *Security* menu.

► Mark the *Password on Boot* field and press the Enter key.

► Select *Disabled* and press the Enter key.

If you do not want to make any other settings, you can exit *BIOS Setup*.

► Select the *Exit Saving Changes* option in the *Exit* menu.

The notebook reboots and there is no longer any password protection for the operating system.

Password protection for hard disk

i | The had disk password prevents unauthorised access to the hard disk drives and is checked internally each time the system is booted. The condition for this is that you have assigned at least the supervisor password.

Activating hard disk protection

► Call *BIOS Setup* and select the *Security* menu.

If you have not assigned BIOS passwords yet, define the supervisor and the user password now, if desired (see "Protecting BIOS Setup (supervisor and user password)" section).

► Mark the *Hard Disk Security* field and select the *Enabled* entry.

If you do not want to make any other settings, you can exit *BIOS Setup*.

► Select the *Exit Saving Changes* option in the *Exit* menu.

The notebook reboots and your hard disk is now protected with a password.

Deactivating hard disk protection

▶   Call *BIOS Setup* and select the *Security* menu.

▶   Mark the field *Hard Disk Security* and select the *Disabled* entry.

If you do not want to make any other settings, you can exit *BIOS Setup*.

▶   Select the *Exit Saving Changes* option in the *Exit* menu.

The notebook restarts.

Configuring and using SmartCard reader

Your notebook is equipped with a SmartCard slot and a special chip to read your SmartCards.

Driver installation

You have to install the chip driver before initial use. Insert the "Security Drivers & Tools" CD, on which this driver is contained. Follow the instructions on the screen.

In addition, you also require the so-called "SmartCard Base Components" to use the SmartCard reader. If you work with the operating systems Windows 2000 or Windows XP, these components are already preinstalled. If you work with the operating systems Windows Me, Windows 98 or Windows NT, you must install the "SmartCard Base Components" from the "Security Drivers & Tools" CD.

SmartCards

SmartCards are not supplied as standard equipment. You can use all SmartCards that comply with the ISO standard 7816-1, -2 or –3. These SmartCards are available from various manufacturers. Under Windows 2000 or Windows XP we recommend the SICRYPT card, as the drivers for this SmartCard are already preinstalled under Windows 2000 and Windows XP.

With the appropriate software you can use your SmartCard as an alternative to password protection, but also as a digital signature or for encrypting your e-mails.

With the *Smarty* security software (part of the "Mobile Secure IT Suite") you can assign a password to your SmartCard. This enables you to safely log on to the operating system under Windows 2000 and under Windows NT.

We recommend that you always use two SmartCards. Always keep one of the SmartCards in a safe place if you carry the other SmartCard with you.

i	The SmartCard can only be used with a PIN so protection is maintained even when the SmartCard is lost. After the incorrect PIN is entered three times, the card is blocked.
	The first time you use your SmartCard you must enter the preset PIN provided by the SmartCard manufacturer or your system administrator.

Inserting the SmartCard
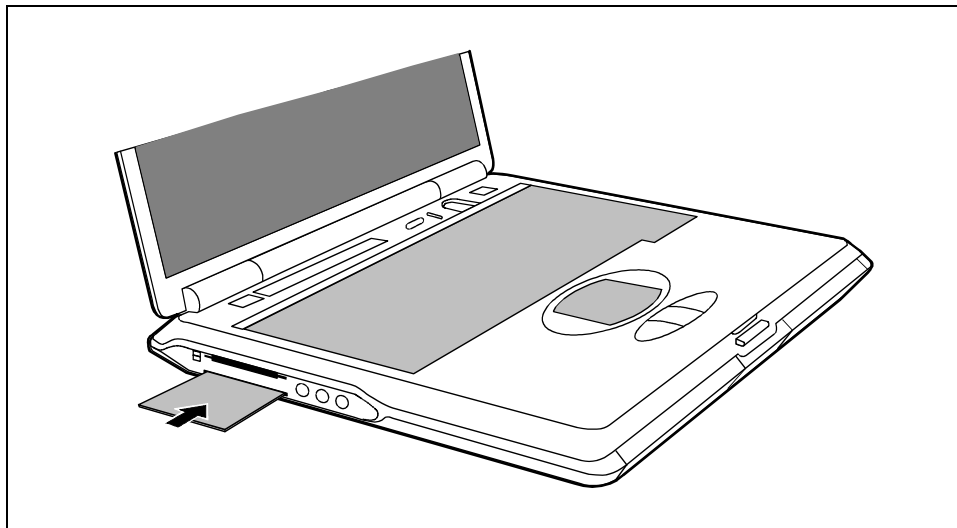
► Carefully push the SmartCard into the slot with the chip facing upward and at the front.

⚠ Never use force when inserting and removing the SmartCard holder and SmartCard.

Make sure that foreign objects do not fall into the SmartCard holder.

Change SmartCard PIN

To change your PIN you must have already booted your system (with the SmartCard and the current PIN).

► Pull the SmartCard out of the SmartCard holder and reinsert the SmartCard when requested to do so.

The window with the request for the PIN entry opens. You will also find a button marked *Options* here.

► Click on *Options* and select the *Change PIN on request* option.

In the next window you can change your User or Admin PIN.

► First enter your current User or Admin PIN and then a four to eight-digit PIN of your own choice.

► Repeat the self-selected PIN in the field below to confirm and click on *OK* to complete the entry.

Application examples

SmartCard as device protection

After switching on the notebook and inserting the SmartCard you are asked to enter your PIN. Upon correct entry the SmartCard is checked and the operating system is booted.

The SmartCard remains in the SmartCard holder during the entire work session.

> **i** When the *Smarty* software (accessory) is used, a password is stored on the SmartCard. This password needs only be entered during the initial setup and in the case of password changes. As a result, a long cryptic character sequence can be used as password which offers greater security than a simple password.
>
> In *Smarty* you can specify how the user is to log on to the operating system:
>
> - only with SmartCard and PIN
> - either with SmartCard and PIN or with password entry
>
> To install, configure and use *Smarty*, please see the documentation and online help on the CD for the *Smarty* software.

SmartCard for protecting your opened documents

The range of functions of the SmartCard enables you to interrupt your work. Thanks to the SmartCard, you can leave your notebook unattended without unauthorised persons being able to access your opened documents and data.

► Pull the SmartCard out of the notebook during your work session.

A window appears stating that the system is locked.

► When you want to continue your work, insert the SmartCard and enter your PIN.

You return to your opened documents.

SmartCard for creating user profiles

With the *Smarty* software you can assign individual rights for different users within a network with the same basic installation under Windows 2000 and Windows NT. You save these individual user profiles on the SmartCards of the individual users with *Smarty*. As a result, each user finds his/her individual configuration at any workstation within the network simply by inserting his/her SmartCard.

Please see the documentation and the online help on the CD for the *Smarty* software for instructions on how to create the personal user profiles.

Using SmartCard for digital signatures

In place of credit card numbers or a bank connection, many e-commerce suppliers also accept SmartCards for concluding sales contracts. Observe the corresponding information at the websites you visit. A prerequisite for this is Windows 2000 or Windows XP.

Using SmartCard for e-mail encryption

To encrypt your e-mails using your SmartCard under Windows 2000/Windows XP you require an e-mail program that permits SmartCard encryption.

Using SmartCard for online banking

To use the security function of the SmartCard for homebanking, first you need an account at a bank that supports homebanking according to the standard HBCI (Homebanking Computer Interface). In addition, you also require a homebanking program.

Configuring and using fingerprint sensor

The fingerprint sensor is not activated by default. You can decide for yourself, whether you log on to the system by entering a password (see "Configuring password protection in BIOS Setup" chapter) or with your fingerprint.

Activating fingerprint sensor

▶ Call *BIOS Setup* and select the *Security* menu.

If you have already defined a supervisor and a user password, you have to delete these passwords now. Follow the instructions in "Protecting BIOS Setup (supervisor and user password)" chapter.

▶ Select the *Supervisor Fingerprint Menu* field and mark the *Enable* entry.

▶ Then select the *User Fingerprint Menu* field and mark the *Enable* entry.

▶ Select the *Exit Saving Changes* option in the *Exit* menu.

The notebook reboots and you enter the *SUPERVISOR Fingerprint Security Menu*.

Testing fingerprint

The option *Please test to find suitable fingers* allows you to test your fingerprint first.

i	Make sure that the contact area for your fingertip is big enough.
	The more uniform the structure of your fingerprint, the less features are recognised by the sensor. However for a secure log on to the system a minimum number of features has to be registered. Therefore find out which of your fingertips have got the necessary features.

▶ Press the [T] key.

▶ Test your finger by placing it on the fingerprint sensor.

When you have found out which of your fingers are suitable for registration, exit the test menu by pressing [Esc].

Registering fingerprint

Registering supervisor fingerprint

► Press the [N] key.

► Press the fingerprint sensor with one fingertip. The fingertip has to be placed on the sensor several times in a row. Follow the instructions in the BIOS window.

After registering the first fingerprint you will re-enter the menu window.

► Press the [N] key to register the next fingerprint.

i	It is necessary to register several fingers to make sure you can log on to your system in case a finger is injured. It is best to use fingers of both hands for registration.

► Press [Esc] after registration is completed.

If you have not yet enough fingers read, a warning is issued. Otherwise you enter the menu to register the user fingerprint (*USER Fingerprint Security Menu*).

Registering user fingerprint

Register several fingers here as well.

► Press the [N] key.

► Press the fingerprint sensor several times in row with each fingertip. Follow the instructions in the BIOS window.

► Press the [Esc] key.

The notebook restarts.

i	If you register supervisor fingerprints only, you can also activate the system protection in *BIOS Setup* using the entry *Password on Boot* (see "Password protection of operating system" chapter).

Using fingerprint sensor
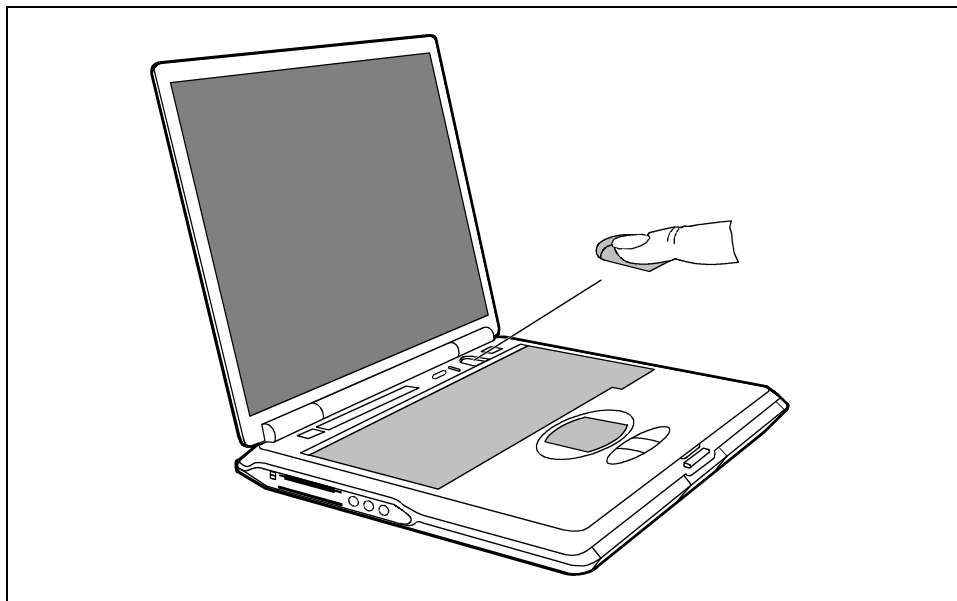
Every time the device is booted you are requested to *Place your finger on the sensor*.

Place one of your registered fingertips (supervisor or user fingerprint) on the sensor. Your notebook boots.

| i | If the fingerprint sensor does not recognise your fingerprint immediately, a note is issued *Sorry, not accepted*. Next time when placing the fingertip on the sensor slightly change the contact position. |

After several failed attempts the system is shut down and you have to reboot.

Adding fingerprint

You can add fingerprints to the already registered ones any time, as long as there is enough memory capacity.

Adding supervisor fingerprint

► Call *BIOS Setup* and select the *Security* menu.

► Select the *Supervisor Fingerprint Menu* field and mark the *Enable* entry.

► Select the *Exit Saving Changes* option in the *Exit* menu.

When rebooting you enter the *SUPERVISOR Fingerprint Security Menu*.

► Press the [N] key.

► Press the required fingertip on the fingerprint sensor several times in a row. Follow the instructions in the BIOS window.

► Press the [Esc] key.

The notebook restarts.

Adding user fingerprint

► Call *BIOS Setup* and select the *Security* menu.

► Select the *Supervisor Fingerprint Menu* field and mark the *Enable* entry.

► Select the *User Fingerprint Menu* field and mark the *Enable* entry.

► Select the *Exit Saving Changes* option in the *Exit* menu.

When rebooting you enter the *SUPERVISOR Fingerprint Security Menu*.

► Press the [Esc] key.

The *USER Fingerprint Security Menu* is called.

► Press the [N] key.

► Press the required fingertip on the fingerprint sensor several times in a row. Follow the instructions in the BIOS window.

► Press the [Esc] key.

The notebook restarts.

Deactivating fingerprint sensor

To deactivate the fingerprint sensor you have to be registered as a supervisor and to be logged on to the system.

► Call *BIOS Setup* and select the *Security* menu.

► Select the *Supervisor Fingerprint Menu* field and mark the *Enable* entry.

► Select the *User Fingerprint Menu* field and mark the *Enable* entry.

► Select the *Exit Saving Changes* option in the *Exit* menu.

When rebooting you enter the fingerprint registration menu.

► Press the [D] key.

You enter a new menu with two options:

Delete user fingerprint only

► Press the $\boxed{U}$ key.

You enter the *User Fingerprint Menu*.

► Press the $\boxed{Esc}$ key to exit the menu.

Delete supervisor and user fingerprint

► Press the $\boxed{R}$ key.

You enter the *Supervisor Fingerprint Menu*.

► Press the $\boxed{Esc}$ key to exit the menu.

The notebook reboots and now you have the option to activate password protection in BIOS Setup (see "Configuring password protection in BIOS Setup" chapter).

Troubleshooting

BIOS passwords

You have forgotten your user and/or supervisor password.

If you have forgotten your user password, enter the supervisor password or contact your system administrator. If the supervisor password is also no longer available, contact our help desk. The help desk will refer you to our service partner, who will unlock your notebook (for a charge). You must provide proof of ownership for the notebook beforehand.

SmartCard reader

Your SmartCard is not recognised.

Make sure you have inserted your SmartCard into the SmartCard holder with the chip facing upward. Also make sure you are using a supported SmartCard. Your SmartCard must comply with the ISO standard 7816-1, -2 or -3.

You have forgotten your PIN.

If you work in a network, contact your system administrator, who can unlock your notebook with an Admin PIN.

You have lost your SmartCard.

If you work in a network, contact your system administrator, who can boot your notebook with an Admin SmartCard.

Fingerprint sensor

The system does not recognise your fingerprint.

Clean the sensor surface with a soft, dry cloth. Place your fingertip in a position that differs slightly from the one at your first attempt to log on.

Connecting external devices

⚠ Under all circumstances, please observe the safety notes provided in the "Important notes" chapter.

Read the documentation on the external device before connecting it.

Do not connect or disconnect cables during a thunderstorm.

Do not pull on the cable when disconnecting a cable. Always take hold of the actual plug.

Adhere to the order described in the following when you connect external devices to the notebook or separate them from the notebook:
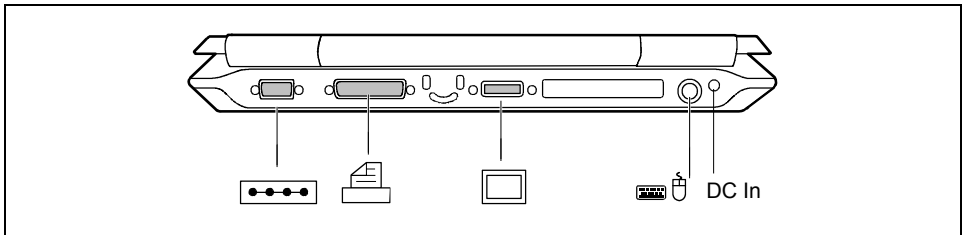
Connecting devices to notebook

1) Turn off all power and equipment switches.
2) Remove all power plugs from the mains outlets.
3) Connect all the cables to the notebook and the external devices.
4) Plug all data communication cables into the utility sockets.
5) Plug all power cables into the mains supply.

Disconnecting devices from notebook

1) Turn off all power and equipment switches.
2) Remove all power plugs from the mains outlets.
3) Unplug all data communication cables from the utility sockets.
4) Disconnect all the cables from the notebook and the external devices.
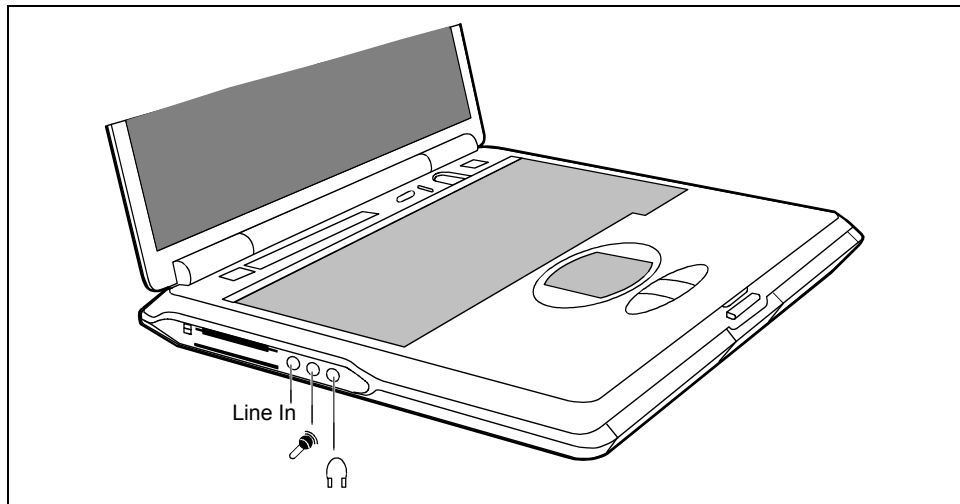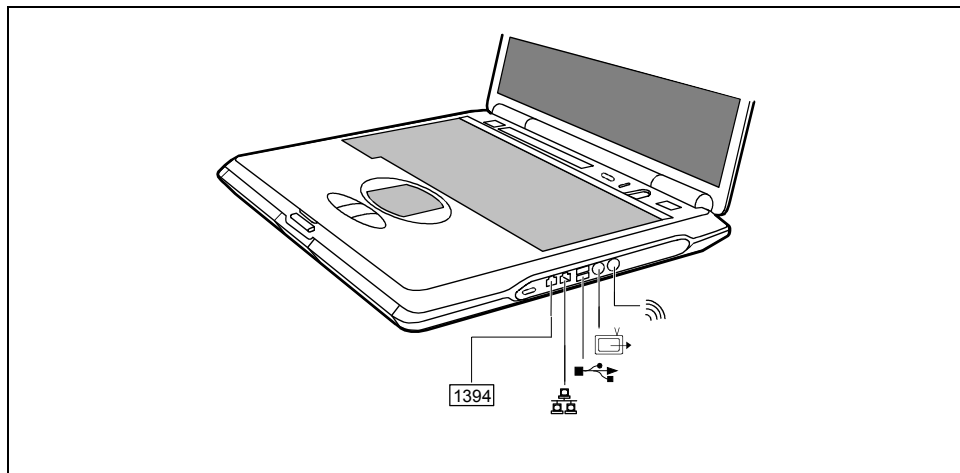
Ports

Connections on the rear

ℹ The connection without a symbol (third connection from the right) is the docking connection. It makes the connection between the devices when you dock the notebook to a docking device.

Line In

Connections on the left side

1394

Connections on the right side

The ports are marked with the following symbols (or with similar symbols):

🔲	LAN-port (Local Area Network, for Network connection)	**DC In**	Port for power adapter
1394	IEEE1394 (FireWire) connection	🎧	Headphones port
⌨🖱	PS/2 port (for keyboard or mouse)	🎤	Microphone jack
🖨	Parallel port	(⸌	Infrared port
▢	Monitor port	●⤙	USB port
▭▶	S-Video out	⊔	Modem port
[OIOI]	Serial port		

> **i** Some of the external devices require special drivers (see the operating system and external device documentation).

Connecting an external monitor

An external monitor can be connected to the digital monitor port of the notebook.
* Using the ⌷Fn⌷ + ⌷F10⌷ key combination you can switch back and forth between the external monitor and the LCD screen.
* If your notebook is equipped with a TFT monitor, you can display the same picture on the external monitor and the LCD screen simultaneously.

► Switch off the notebook and the external monitor.

> **i** If you want to connect an analogue monitor, please use the monitor adapter supplied with your workstation:
>
> ► Connect the monitor adapter supplied with your notebook to the monitor port of the notebook.

► Connect the external monitor to the monitor port.
► First switch on the monitor and then the notebook.

Setting the refresh rate for your external monitor

The refresh rate must be correctly set so that the image does not flicker.

► To change the refresh rate or resolution select the monitor type in the menu *Start - Settings - Control Panel - Display - Settings - Advanced - Monitor*.

► Now select the *Adapter* tab.

► Adjust the refresh rate and then click *Apply*.

> ⚠ If the refresh rate set is too high, the monitor may be damaged. Please see the documentation included with your monitor for the maximum possible refresh rate.

Connecting an external keyboard

You do not need to switch your notebook off.

► Simply connect the external keyboard to the PS/2 port on your notebook.

Connecting an external PS/2 mouse

You do not need to switch the notebook off.

► Simply connect the mouse to the PS/2 port on your notebook.

Connecting a serial mouse

► Switch the notebook off.

► Connect the mouse to the parallel port on your notebook.

► Switch the notebook on.

► Run the mouse service programme under *Start - Settings - Control Panel* and select the *General* tab.

► Select the correct mouse type.

► Restart the notebook.

Using the parallel port

► Switch the notebook off.

► Connect the data cable of the printer to the parallel port on the notebook.

► Plug the printer power cable into the mains outlet.

► First switch the printer on, then the notebook.

Establishing an infrared connection

Using the infrared software for Windows, you can communicate with another PC or printer equipped with an infrared interface.

i	Before you can establish an infrared connection, you must have activated the infrared software. Additional information on the infrared interface is contained in the Windows help in the Start menu under the topic "Infrared".

Configuring the infrared connection

By default, the mode for the infrared port is set to *FIR* ("Fast IrDA Mode") in the *BIOS Setup*. If you want to communicate with a system on which Windows ME is not running, you can change the setting to *IrDA*. Please note that *IrDA* is the slower mode and is generally used on older computers.

Connecting USB devices

On the USB ports you can connect external devices that also have a USB port (e.g. a printer, a scanner or a modem).

i	USB devices are hot-pluggable. This allows cables from USB devices to be connected and disconnected with the system switched on.
	Additional information can be found in the documentation for the USB devices.

►   Connect the data cable to the external device.

►   Connect the data cable to a USB port .

i	**Device drivers**
	The devices you connect to the USB ports usually require no driver of their own, as the required software is already included in the operating system. However, if the USB device requires its own software, please install it from the data carrier provided with the USB device.

Operating notebook with docking device

Docking devices turn notebooks into convenient standard workstations in a flash. Only the Port Replicator II-L can be used as a docking device for this notebook.

For additional information on the Port Replicator II-L, also see the documentation on the docking devices.

| i	You should install your notebook's software (operating system, device drivers) before docking your notebook the first time.

Mounting the Tray

A Tray assumes the mechanical adaptation of the notebook to the docking device. You must mount the Tray on the docking device before you can dock the notebook.

For this notebook you require the device platform W.
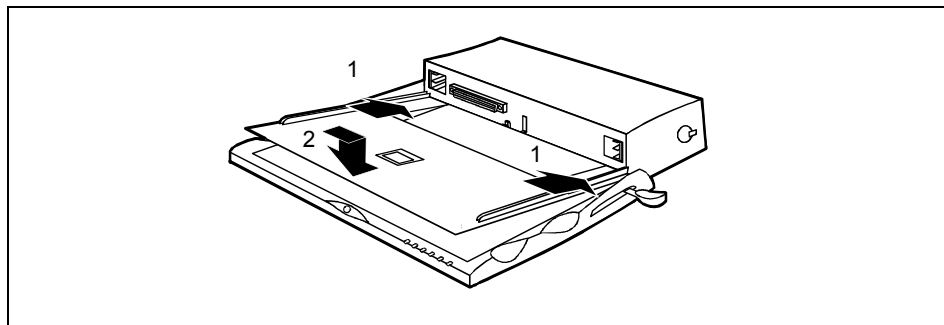
► Hold the Tray at an angle over the docking device and push the Tray straight into the notches in the docking device (1).

► Press down the front corners of the Tray (2) until they engage.

Removing the Tray
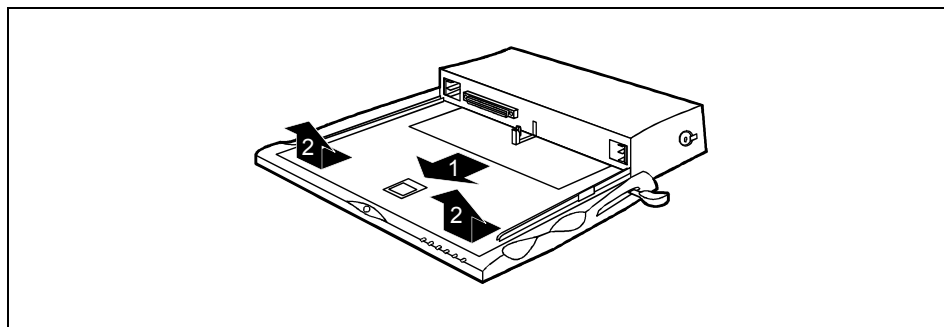
► Push the release (1) in the direction of the arrow until the Tray is released on both sides.
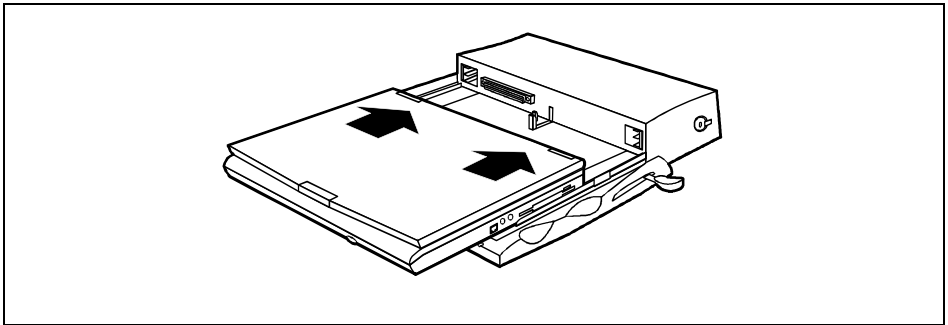
► Remove the Tray (2).

Docking the notebook

Docking a notebook while switched off

The power adapter cable may not be connected to the DC socket (DC IN) of the notebook when you dock the notebook. The notebook must be in the battery mode.

► Put your docking device into operation (see documentation for the docking devices).

► Mount the suitable Tray on the docking device.

► Switch the notebook off.

► Disconnect all cables connected to notebook.

► Make sure that the PC card eject buttons of the notebook are pressed in.

► Place your notebook on the docking device and push it evenly in the direction of the arrows until you feel it engage.

Switching on docked notebook

► Press the Suspend/Resume button of the notebook.

or

► Press the Suspend/Resume button on the left-hand side of the docking device.
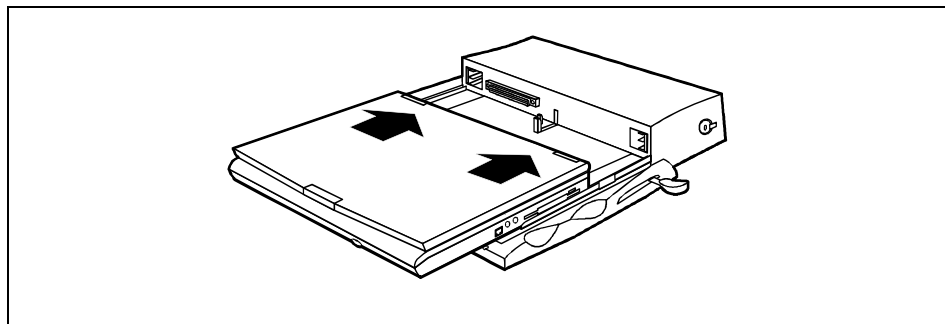
Docking notebook while running

If an operating system is installed on your notebook that supports "Plug & Play" and "hot docking" (e.g. Windows 98), you need not switch off the notebook for docking.
The notebook may also be in an energy-saving mode.

⚠ The power adapter cable may not be connected to the DC socket (DC IN) of the notebook when you dock the notebook. The notebook must be in the battery mode.

► Put your docking device into operation (see documentation for the docking devices).
► Mount the suitable Tray on the docking device.
► Disconnect all cables connected to notebook.
► Make sure that the PC card eject buttons of the notebook are pressed in.

► Place your notebook on the docking device and push it evenly in the direction of the arrows until you feel it engage.

Undocking the notebook

Undocking notebook when switched off
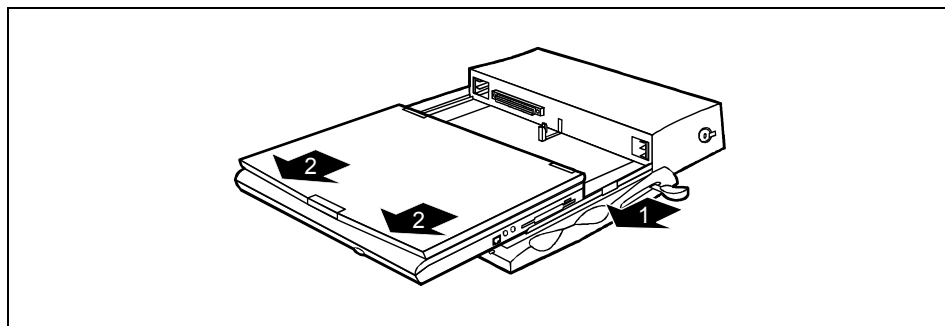
► Move the lever in the direction of the arrow (1).
► Remove the notebook toward the front (2).

Undocking notebook while running

If an operating system is installed on your notebook that supports "Plug & Play" and "hot docking" (e.g. Windows 98), you need not switch off the notebook for undocking.
The notebook may also be in an energy-saving mode.

You must prepare the notebook for undocking.

► To do this, select *Eject PC* in the Start menu.

or

► Press the key combination ⌐Fn⌐ + ⌐F2⌐.

The notebook then ends all connections to the docking device.

Settings in BIOS Setup

In *BIOS Setup* you can set the system functions and the hardware configuration of the notebook. The settings can only be changed via the keyboard.

When it is delivered, the notebook is set to factory default settings. You can change these settings in *BIOS Setup*. Any changes you make take effect as soon as you save and quit the *BIOS Setup*.

The *BIOS Setup* programme contains the following menus:

Main:	for system settings as time, date, hard disk and monitor selection
Advanced:	for system settings such as ports and keyboard
Security:	for password settings and safety functions
Power:	for setting the energy saving functions
Boot:	for configuring the boot sequence
Info:	for displaying the system configuration (e.g. processor and memory configuration)
Exit:	to exit the *BIOS Setup*

Start BIOS Setup

► Restart the notebook (switching ON/OFF or warm boot).

The following display briefly appears on the screen during start-up:

```
<ESC> Diagnostic screen   <F12> Boot Menu   <F2> BIOS Setup <F6> Battery
learning
```

► When this message appears, press the key **F2**.

<table>
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i

</td>
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If *BIOS Setup* is protected by a password or fingerprint:

► Enter the password and press the Enter key.

Or

► Place one of your registered fingertips on the fingerprint sensor.

If you have forgotten the password, contact your system administrator or contact our hotline/help desk.

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Operating BIOS setup

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Press the **F1** key to display help on the operation of *BIOS Setup*.
The description of the individual settings is shown in the right-hand window of the *BIOS Setup*.

You can revert to the default settings for the *BIOS Setup* menu you are currently in, by using the **F9** function key.

</td>
</tr>
</table>

► Use the cursor key ← or → to select the menu you wish to access to make changes.

► Press the Enter key.

The menu is displayed on the screen.

►   Use the cursor key ⬆ or ⬇ to select the field you wish to change.

►   Press the space bar to confirm your selection.

►   Press the [ESC] key to exit the selected menu.

►   For future reference, make a note of the changes you have made (for example, in this manual).

Exiting BIOS-Setup

To exit *BIOS Setup*, select the *Exit* menu from the menu bar. You can then decide which settings you want to save. The *Exit* menu offers the following options.

You must mark the required option and activate it with the Enter key.

Exit Saving Changes

Select *Exit Saving Changes* and *Yes* to save the current settings and exit the *BIOS Setup*. The device is rebooted and the new settings come into effect.

Exit Discard Changes

Select *Exit Discard Changes* and *Yes* to discard the changes you have made. The settings which were in force when *BIOS Setup* was called remain effective. *BIOS Setup* is terminated and the device is rebooted.

Load Setup Default

To revert all the menus of *BIOS Setup* to the default entries, select *Load Setup Default* and *Yes*.

Discard Changes

To load the values of all the menus of *BIOS Setup* that were in effect when *BIOS Setup* was called, select *Discard Changes* and *Yes*. If you want to exit *BIOS Setup* with these settings, select *Exit Saving Changes* and *Yes*.

Save Changes

To save settings without exiting *BIOS Setup*, select *Save Changes* and *Yes*.

Troubleshooting and tips

⚠ Take note of the hints in the "Connecting external devices" chapter, when you connect or disconnect cables.

If a fault occurs in your notebook, try to eliminate it with the measures described in this chapter. If you fail to correct the problem, proceed as follows:

► Make a note of the steps and the circumstances that led to the fault. Also make a note of any error messages displayed.

► Switch the notebook off.

► Contact your sales outlet or our hotline/help desk.

Installing new software

When installing programmes or drivers, important files may be overwritten and modified. To be able to access the original data in the case of any problems following installation, you should backup your hard disk prior to installation.

Restoring the contents of the hard disk under Windows

Using the Windows Recovery CD and the "CELSIUS Mobile Driver CD", you can restore the operating system of your notebook.

During restoring the operating manual the contents of your hard disk will be overwritten. After this, operating system, drivers and software utilities will be reinstalled. For this reason you should try to save important data to a backup medium before you restore the hard disk contents.

► Insert the Windows Recovery CD into the optical drive and switch the notebook on.

► Follow the instructions on the screen.

i Detailed PC knowledge is required for manual partitioning.

You must then reinstall all the drivers. Use the "CELSIUS Mobile Driver CD".

The notebook's date or time is incorrect

► Double-click on the clock in the task bar and adjust the time.

or

► Set the time and/or date in the *BIOS Setup* menu *Main*.

i	If the date and time are repeatedly incorrect when you switch on the notebook, the buffer battery that supplies the internal clock is dead.
	Connect the notebook via its power adapter to a grounded mains outlet or install a fresh battery. The buffer battery will take approximately two days to complete its recharge. Should the problem persist, please contact our hotline/help desk.

Battery indicator does not illuminate

Battery is not installed or is defective

If the battery status indicator does not light up, either no battery is installed or there is no contact between the notebook and the battery.

► Check whether the battery is installed correctly in its compartment.

It may be necessary to replace the battery with a new one. When you dispose of used batteries, please observe the safety instructions in the "Important notes" chapter.

The LCD screen of the notebook remains blank

Monitor is switched off

► Press a key or enter the password

External monitor or television set connected

► Set the setting *Display Settings* to *LCD BIOS-Setup* in the menu *Advanced - Video Features*.

The LCD display panel is difficult to read

Reflection

► Turn the notebook or alter the tilt of the LCD display panel.

The external monitor stays blank

If your screen remains blank this may be due to the following:

Monitor is switched off

► Switch the external monitor on.

Power saving has been activated (screen is blank)

► Press any key to continue.

Brightness is set too dark

► Adjust the brightness of the monitor.

Screen output is set to the notebook's LCD screen

► Press the key combination $\boxed{\text{Fn}}$ + $\boxed{\text{F10}}$ (selecting internal/external display).

The external monitor's power cable or data cable is not connected properly

► Switch off the external monitor and the notebook.
► Check whether the power cable is plugged properly into the external monitor and into the power socket.
► If necessary, check whether the power adapter is plugged properly into the external monitor and into the power socket.
► Check whether the data cable is properly connected to the notebook and the external monitor (if it is plugged in with a connector).
► Switch on the external monitor and the notebook.

The external monitor is blank or the image is unstable

Two causes are possible: An incorrect type has been selected for the external monitor or the wrong screen resolution has been set for the application programme.

► Terminate the application programme with $\boxed{\text{Alt}}$ + $\boxed{\text{F4}}$.

If the fault continues to occur after ending the programme, switch over to the notebook's internal LCD screen with $\boxed{\text{Fn}}$ + $\boxed{\text{F10}}$. Change the following setting:

► Select *Start - Settings- Control Panel - Display - Settings* and then the screen resolution you require in the *Resolution* field.

or

► Select the correct monitor under *Start - Settings- Control Panel - Display - Settings - Advanced Properties - Monitor - Modify*.

The notebook cannot be started

If the notebook does not start after switch on, this may be due to one of the following:

The battery is not installed correctly

► Switch the notebook off.

► Check whether the battery is installed correctly in its compartment.

► Switch the notebook on.

The battery is dead

► Charge the battery.

Or

► Install a charged battery.

Or

► Connect the power adapter to the notebook.

The power adapter is not connected correctly

► Switch the notebook off.

► Check whether the power adapter is connected correctly to the notebook.

► Check whether the power cable is plugged properly into the power adapter and into the mains outlet.

► Switch the notebook on.

The notebook stops working

If the notebook stops working, this may have the following reasons:

The notebook is in Standby or Suspend mode

► Reactivate the notebook by pressing a key (Standby mode) or by switching it back on (Suspend mode).

An application programme has caused the malfunction

► Close the application programme or restart the notebook by switching it on/off or with a warm boot.

The battery is dead

► Charge the battery.

Or

► Install a charged battery.

Or

► Connect the power adapter to the notebook.

The mouse does not work

If the connected mouse does not work, the following can cause it:

Incorrect setting in BIOS Setup

► Check the setting *Hotplug* in the *BIOS Setup* in the menu *Advanced - Keyboard/Mouse Features*.

The setting must be set to *Enabled*.

Touchpad driver is not installed properly

► Deinstall the touchpad driver.

► Install the actual driver from the "Drivers & Utilities" CD.

Mouse driver is not loaded

► Check whether the correct mouse driver is properly installed and is present before the application programme is started.
Detailed information can be found in the User guides for the mouse or application programme.

Mouse is not connected

► Switch the notebook off.

► Check whether the mouse cable is correctly connected to the notebook.
If you use an adapter or extension lead with the mouse cable, check the connections.

► Switch the notebook on.

The floppy disk cannot be written

► Check whether the disk is OK and is not write-protected.

The printer does not print

► Make sure that the printer is switched on and is on-line (see the manuals supplied with the printer).

► Check that the cable connecting the notebook and the printer is connected properly.

► Check that the correct printer driver is installed.

► Check in the *BIOS Setup* whether the *Advanced - I/O Device Configuration* field is set to *Enabled* for the port you are using.

The respective entry in the fields of *Serial port* or *Parallel port* must match the setting in the application programme under Windows.

The notebook casing gets warm

Your notebook is designed to give off the heat loss of the integrated components via heat dissipation of the housing surface. Under extreme operating conditions the temperature inside the casing can reach 60°C.

It is normal for the housing to become warm and is not a reason for concern.

Acoustic warnings

A beep sounds every few seconds

The battery is almost flat.

► Charge the battery.

Error messages on the screen

This section describes the error messages generated by the *BIOS-Setup*. Error messages displayed by the operating system or programmes are described in the relevant manuals.

CMOS Battery Bad

If the error message occurs repeatedly, then the buffer battery in the notebook is flat.

► Connect the notebook via its power adapter to the mains outlet. The buffer battery will take approximately two days to complete its recharge.

If the error message appears repeatedly, please contact the place of purchase or our hotline/help desk.

System CMOS checksum bad - Default configuration used

The system configuration information is incorrect.

► Restart the notebook.

► Enter the *BIOS Setup* programme by pressing $\boxed{\text{F2}}$.

► Select the *Exit* menu in the *BIOS Setup*.

► Select the *Default Setup* entry and click on *OK*.

If the error message appears repeatedly, please contact the place of purchase or our hotline/help desk.

Insert system diskette and press Enter key to reboot

The operating system cannot be loaded or the hard disk contains no operating system or is not formatted.

► Insert a system disk.

► Press any key to continue.

Invalid system disk - Replace the disk, and then press any key

The inserted disk is not a system disk or the inserted system disk is defective.

► Insert another system disk.

► Press any key to continue.

If you wish to boot from floppy disk:

► Insert a system disk.

► Press any key to continue.

Diskette drive A error

► Start the *BIOS Setup* and make sure that the parameter for floppy disk drive A has been set to the format 1.44 Mbyte, 3 1/2 inch.

Extended memory failed at offset: xxxx Failing Bits: zzzz zzzz

When testing the extended memory an error has resulted at the address xxxx.

► Check whether the additional memory module has been inserted correctly.

Should you receive this error message again, please contact your dealer.

Failure Fixed Disk n

The settings of the hard disk drive are incorrect.

► Start the *BIOS Setup* (*IDE Adapter 0 Master* submenu) and select the correct settings.

Fixed Disk address conflict Diskette Drive address conflict

There is an I/O address conflict.

► Start the *BIOS Setup* and check the corresponding settings.

Incorrect Drive A type - run SETUP

► Start the *BIOS Setup* and make sure that the parameter for floppy disk drive A has been set to the format 1.44 Mbyte, 3 1/2 inch.

Keyboard controller error

► Switch off the notebook with the Suspend/Resume button.

► Wait 3 - 5 seconds and switch on the notebook again.

If this error message appears again, please contact your point of sale or our hotline/help desk.

Keyboard error

If you use an external keyboard:

► Check the connection and reboot the notebook.

If this error message appears again, please contact your point of sale or our hotline/help desk.

nn Stuck key

► Make sure that no key is pressed.

If this error message appears again, please contact your point of sale or our hotline/help desk.

Operating system not found

► Check in the *BIOS Setup* whether your hard disk has been set correctly.

► Make sure that the operating system is installed on the corresponding drive.

Not enough Save-to-Disk partition or file exists on Fixed Disk - Save-to-Disk feature is disabled.

The Save-to-Disk mode is not available to you, as no memory space has been assigned to this mode.

► Use the *PHDISK* utility to assign the memory space required for this mode.

Press <F1> to resume, <F2> to SETUP.

This error message appears if an error occurs during the self-test before starting the operating system.

► Press the [F1] function key to start the operating system.

► Enter the *BIOS Setup* programme by pressing [F2].

Previous boot incomplete - Default configuration used

Due to an error during the previous system boot, default values were used for certain settings. Check the *BIOS Setup* and the settings.

► Press the [F1] function key when prompted to do so.

Real Time clock error

► Contact your sales outlet or our hotline/help desk.

nnnnK Shadow RAM failed at offset: xxxx Failing Bits: zzzz

► Contact your sales outlet or our hotline/help desk.

System battery is dead - Replace and run SETUP

► Contact your sales outlet or our hotline/help desk.

System cache error - Cache disabled

► Contact your sales outlet or our hotline/help desk.

nnnnK System RAM failed at offset: xxxx Failing Bits: zzzz

► If you have installed a DIMM, you should remove the module and reboot the notebook.

If the error message is no longer displayed, the error concerned is DIMM-related. Should you receive this error message again, please contact your dealer.

System timer error

► Contact your sales outlet or our hotline/help desk.

Memory expansion

⚠ The notebook must be switched off when installing/removing the memory modules, it must not be in Suspend mode.

So that the current data can be saved in the *Save to Disk* suspend mode, sufficient memory space must be available on the hard disk (at least the size of the main memory +32 Mbytes).

Install only memory expansions that satisfy the requirements and rules governing safety, RFI and electromagnetic compatibility and relating to telecommunications terminal equipment (see the "Important notes" chapter).

Use only memory expansions which have been released for your notebook (64, 128, and 256 Mbyte modules, SD RAM, JEDEC 144 pin SO DIMM, 3.3 V).

Never use force when installing or removing memory modules.

Make sure that foreign objects do not fall into the memory module compartment.

The main memory of your notebook can be expanded to a maximum of 10242 Mbyte with another memory module. The notebook will not start without memory modules, as no fixed main memory is installed.

Removing and installing memory extension

⚠ Please note the information provided in the "Notes on installing and removing boards and modules" section in the "Important notes" chapter.

► Switch off the notebook and all devices connected.
► Close the LCD screen so that it locks into place.
► Unplug the power adapter from the mains outlet.
► Remove the battery (see "Removing the battery").
► Disconnect all cables connected to the notebook.
► Place the notebook upside down on a flat surface.

Removing cover
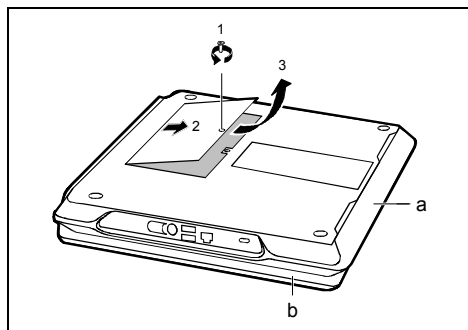
a = Front
b = Right side panel

► Remove the three screws (1).

► Lift the cover off the notebook in the direction of the arrow (2).

► Pull off the cover from the notebook in the direction of the arrow (3).

Installing memory modules
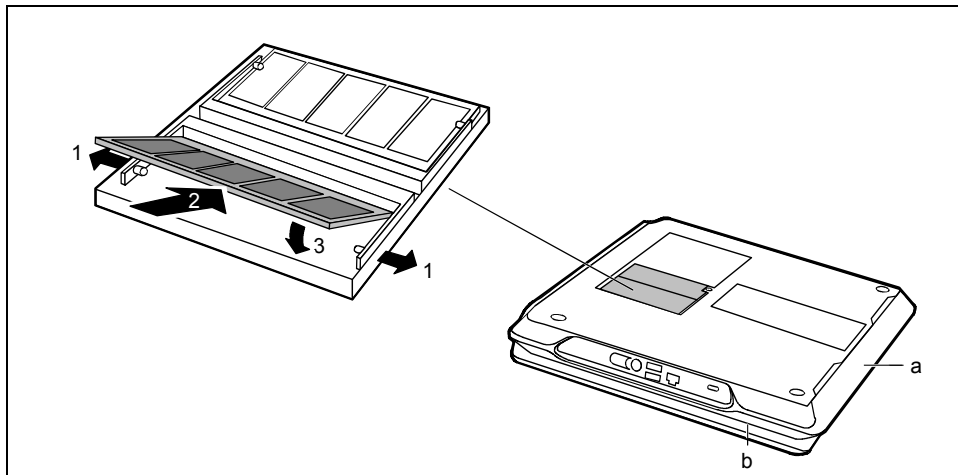
a = Front
b = Right side panel

► Carefully push the two mounting clips outwards (1).

► Insert the memory module, contacts first, into the slot (2).

► Carefully push the memory module downwards until you feel it latch into place (3).

Removing memory modules
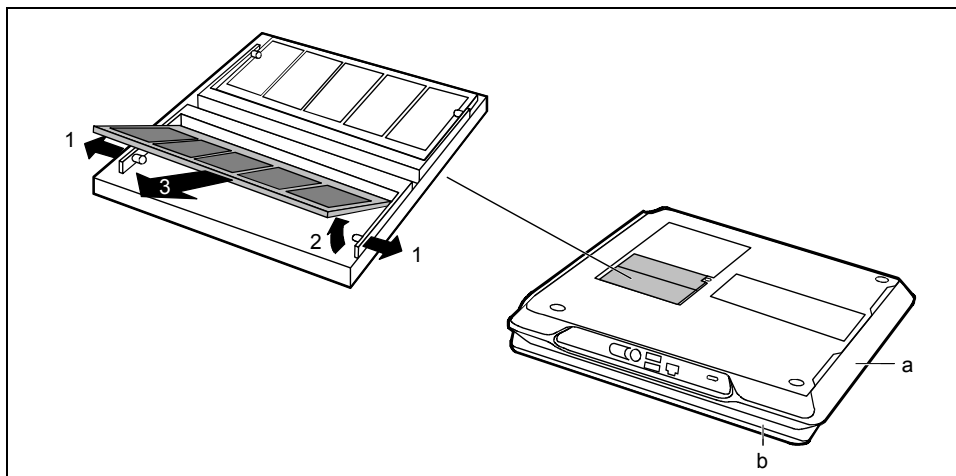
a = Front
b = Right side panel

► Carefully push the two mounting clips outwards (1).

The memory module will flap upward (2).

► Pull the memory module out of its slot (3).

Mounting the cover
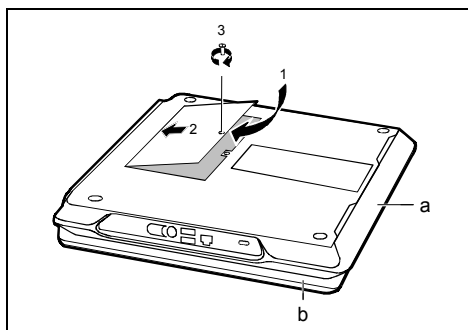
a = Front
b = Right side panel

► Place the cover on its mounting location (1).

► Close the cover on the bottom of the notebook (2).

► Fasten the cover with the screws (3).

► Refit the battery.

► Place the notebook right side up on a flat, stabile, nonslippery surface.

► Reconnect the cables.

Technical data

Notebook

Processor:	Intel Mobile Pentium III Tualatin 1 GHz and 1.13 GHz
Chipset:	Intel 830 MP
Socket:	µFCPGA2
Main memory:	Maximum 1 Gbyte PC 133 SO DIMM
	2 slots for 512 Mbyte modules
	JEDEC 144 pin

Possible modules:

- Battery (2x)
- Hard disk drive
- Floppy disk drive LS-240
- DVD drive
- CD-RW drive
- Combo drive (CD-RW/DVD)
- second hard disk drive
- third hard disk drive

Electrical data

Regulations complied with:	EN60950, IEC60950, UL1950, CSA22.2 No. 950, ISO9241, FCC Part 15 Class B
Protection class:	III
Maximum power draw: (notebook on with battery charging)	80 W

LCD display panel

Display diagonal:	15 inch UXGA TFT LVDS-port
Supported screen resolution:	max. UXGA, 1400x1050

Graphics

Chip:	ATI Mobility Radeon M6-P with DDR RAM
Video memory:	32 MB
Supported resolutions on external monitor:	
Colour depth:	max. QXGA, 2048x1536
	32 bit

Audio

Sound: ESS Allegro ES1988

Modem (Mini PCI modem)

Combo Modem with LAN   56K, V.90 / Ethernet 10/100, PME, AOL 2.0,
                                                WOL
Combo module: IEEE1394

Input devices

Keyboard: 88 keys
Touchpad: 3 keys

Slots

PC Card slots (CardBus/PCMCIA):   PCMCIA 2 x Type II or 1 x Type III,
                                                PC card controller O2 Micro OZ711E1 and
                                                OZ6912

Ports

- PS/2 port: 6-pin mini DIN female connector
- Parallel port: 25-pin female connector, bi-directional, ECP
                                                capable
- Monitor port: Female connector, DVI-I, 24- and 5-pin (digital
                                                and analogue)
- Serial port: 9-pin male connector, RS232C
- Microphone jack: connector, mono
- Digital Line-In headphone port (SP/DIF):   connector, stereo
- S-Video Out port   7-pin mini DIN female connector
- Modem port: Female connector, RJ-11 once
- USB port (Universal Serial Bus):   twice
- Infrared interface: FIrDA 1.1 (Max 4M)
- LAN connector: Female connector, RJ-45
- Docking port: 240-pin Port Replicator II-L
- Kensington Lock

Environmental conditions

Environment class 7K1   DIN IEC 721
Temperature:

- Operating (7K1)   5 °C .... 35 °C

- Transport (2K2)   -15 °C .... 60 °C

Dimensions

Width/depth/height: 341 mm/278 mm/39,5 mm
Weight: ca. 3.1 kg (Li-Ion battery and DVD included)

Battery

Rated voltage: 11,1 V
Rated capacity: 66 Wh

Charging time (when not in operation):   3 hours

Operating time with a battery: approx. > 3 hours (without power management)

Power adapter

Primary
- Rated voltage: 100 V to 240 V (automatic)

- Frequency: 50 Hz to 60 Hz (automatic)

- Max. rated current: 1,5 A

Secondary

- Rated voltage: 19 V

- Max. rated current: 4,2 A

You can readily order an additional power adapter and an additional power cable.

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